THE BUILDER

Incorporating ARCHITECTURE & THE BRITISH ARCHITECT

THE BUILDER HOUSE, CATHERINE STREET, ALDWYCH, LONDON, WC2

Telephones: Temple Bar 6251-2-3-4

RICKER LIBRARY ARCHITECTURE
UNIVERSITY OF ILLINOIS

Vol. clxxxvii November 19, 1954 No. 5831

PRINCIPAL CONTENTS

ARTICLES	PAGE
CORRESPONDENCE	814
CHURCH HEATING: Committee's Review	815
DEMONSTRATION HOUSES, CANTERBURY: By L. Hugh Wilson	830
RICS: Presidential Address	832
IN PARLIAMENT	833
RPI: New President Installed	833
SURFACE FINISHES OF CONCRETE	835

ILLUSTRATIONS	PAGE
PROPOSED SPORTS CENTRE, CRYSTAL PALACE: By J. L. Martin	818
"ALLIANCE HOUSE," BOURNEMOUTH: By Jackson and Greenen	820
"TOWNSON" HOUSES, SCHEME FOR LEYLAND UDC: By Grenfell Baines and Hargreaves	823

NEWS SUMMARY

A COMMITTEE of architects and heating engineers appointed by the Central Council for the Care of Churches have reviewed the whole subject of Church Heating. p. 815

THE PROPOSED Crystal Palace Sports Centre, the plans for which were made known last week, is illustrated and described. p. 818

BRIXTON SCHOOL OF BUILDING'S first 50 years of activity have been celebrated by a jubilee exhibition and dinner. p. 829

SAVINGS IN COSTS of over £50 are claimed in demonstration houses built at Canterbury, using the cross-wall technique. p. 830

THE RICS have appointed a committee to initiate the preparations for the rebuilding of the Institution's new premises. p. 832

THE ABT have replied to some of the points made by the British Architectural Guild in their statement last week. p. 834

THE CITY'S ELEVENTH HOUR

IN our issue of October 22, in a leader on "Skyscrapers for London," we drew attention to the traffic problems created by high buildings, pointing out, *inter alia*: "It is not merely a question of requiring that new buildings should provide parking accommodation for the cars or vehicles of occupants or visitors. Such cars and vehicles have to get there and back and in the process may bring traffic to a standstill."

Since then, Mr. John Boyd-Carpenter, Minister of Transport, has pointed out that quite a small addition to the present volume of London traffic might have the effect of bringing it to a standstill. Also, Sir John Elliot, chairman of the London Transport Executive, has expressed the opinion that it is unsound to make it easier to park private motor vehicles in large cities as they are today, and has recommended the provision of car parks at the city approaches, charging low fees for a day's parking, and in London to transfer the passengers to electrified suburban and underground railways for rapid transit to all parts of the Metropolis. "London would need two or three new tubes."

The reply of the standing joint committee of the Royal Automobile Club, the Automobile Association and the Royal Scottish Automobile Club, to this recommendation is that any attempt to impose restrictions on the entry of private vehicles into city centres would be unworkable. This reply suggests that city centres must adapt themselves to the motorist—not the motorist to the city centre. Should this view be accepted, then office and business accommodation in most existing city centres must—failing complete reconstruction at phenomenal expense and inconvenience—obviously be drastically reduced to the point where those having business within them and wishing to travel by private car can move to and fro and about the city centre at their ease, parking their cars as they wish.

With reference to London in particular: these authoritative statements by the Minister of Transport and the chairman of London Transport Executive emphasise both the gravity of the situation to which we drew attention and the need for action, based on a comprehensive town planning policy; lest quite a small addition to the present volume of traffic should bring it to a standstill and thereby render the City incapable of fulfilling its function as the commercial centre of the country and the Commonwealth.

Such a policy must, of course, be based on a measure of decentralisation, having regard to the fact that, at the present time, with much of the City still to be rebuilt and the output of new cars increasing day by day, not only is road traffic nearing a standstill but also at rush hours conditions of travel underground and by bus are well nigh intolerable.

"FANCY DRESS"

WE once asked a young architect of strong *avant-garde* convictions what he would do if invited to design a house in the Tudor manner. "Refuse the job," he replied indignantly. He was right, of course, to stick to his principles. Architects, though, were not always so unaccommodating. The Classic Barry, for example, cheerfully encased his Classically planned Houses of Parliament in Tudor Gothic detail; the Gothicist Gilbert Scott readily switched over, on request, from Gothic to Italian Renaissance in his design for the Home Office; and Norman Shaw could move without perturbation from designing a country mansion in the Tudor manner, complete with sham half-timber, to a West End house in "Queen Anne" or a giant hotel in debased Classic. This sort of thing, which used to be regarded as a sign of clever versatility, is nowadays considered naughty, if not immoral, and is curtly dismissed as "fancy dress."

In our desire to be true to ourselves and to the materials and techniques of our own time, however, is there a danger of our drifting into aesthetic formalism—of perpe-

trating a new kind of fancy dress? MR. PETER SHEPHEARD seems to think so. The formalist, he said in his stimulating Presidential Address to the Architectural Association (*The Builder*, November 5), was "one who had the idea of the building before the building," and it was all one whether this preconceived idea was Florentine, Georgian, that of a glass-walled slab, or of a building on pilotis. It was maddening, he added, to see new formalisms different only in appearance from the old—of architecture built for other architects, of buildings which, instead of solving a practical problem, solved an aesthetic one, and gave the client not a building, but a beautiful and expensive abstract sculpture which had then to be sullied by the furniture and habits of its users. All this appears to us to be excellent sense, though it is not likely to please the inhabitants of ivory towers.

There is, rightly, a deep concern nowadays for outward appearance, not only of the unit, but of the relationship of the units one to another—for the creation, in brief, of towns and cities as satisfactory wholes, functionally and visually. Where there are wide differences of opinion about aesthetics among those who have to do the creating, however, the chance of a completely successful result, lacking an inspired dictator with the will power of Napoleon in control, seems rather remote. And if we had such a dictator we should probably soon get rid of him.

The chorus of conflicting counsel and criticism that is now going up over the rebuilding of the City (to come from the general to the particular) out-babels Babel. Any sensitive architect who has a job to do there must be bewildered by the task of reconciling the practical needs of his client with the aesthetic demands of the idealists, if he pays any attention to them at all. Unless he is like our young architect friend and "refuses the job," he will probably have to compromise, and unless we are much mistaken there will be a good deal of this about the new City. In the end the architect will not, perhaps, go far wrong if he sticks to first principles, forgets all "fancy dress," and remembers that in the words of Mr. Shepheard, he is "a practical man with practical solutions for contemporary problems."

Notes of the Week

THE ROLE OF SCIENCE

PROFESSOR Robert H. Matthew, in his thoughtful talk on "Science in Architecture" on the Third Programme last Sunday evening, opened up a new vista of architecture in the years ahead. He emphasised the great progress made in structural techniques and the immense amount of research that has been done on isolated aspects of building—materials, lighting, mechanical services, acoustics, and so forth—but suggested that there was a need for much more experiment and particularly for co-ordination of effort. He drew attention to the gap between supply and demand for buildings of all kinds, and suggested that this could be closed, at least in part, by more economical building. Shell concrete, he pointed out, had opened up a new chapter in design. The mathematical calculations for this were beyond most architects and some engineers. The design of buildings would have to be a combined operation. He stressed the effect of progress on technical education.

CRAFTS FOR CHRISTMAS

THE CRAFTS CENTRE of Great Britain is holding its Annual Christmas Exhibition until December 23, at 16-17, Hayhill, W1. Since it is a non-profit making body, I can perhaps point out that there are only all-too-few shopping days to Christmas, writes Basil Marriott, and the exhibition's intention is excusably plain.

I recently read what seemed to me an expression of rather dangerously muddled thinking in a responsible paper, to the effect that a revival of interest in craftsmanship was due to sentimentalism. It is, of course, obvious that nostalgia for obsolete materials and methods leads, for instance, to things like "fancy dress" architecture which, apart from being phoney, is generally poor value for money. But where both the materials and craftsmanship *are* still available, *and* the result can compete in both price and design with the mass-produced trash too often passing as "contemporary design," the revival of interest is surely less likely to be sentiment than the intensifying search for hard value for hard-earned money by people who are less well endowed with it than with sense—and taste.

It is true that the craftsman does not always seem able or willing to compete, but no body is doing more to persuade him than the Craft Centre, and if you are "sentimental" enough to prefer to give things honestly made of honest materials, you might do worse than set reindeer-course for Hay-hill—where prices range from literally a few shillings upwards.

A VARIED SELECTION

THINGS I liked best (not a hint—not a rich uncle in sight!) included several colour prints quite reasonably priced: Lilian Dring's embroidered Christmas cards (just the thing for that last-minute conscience-salver); an eminently practical as well as gay sewing-apron by Joyce Clissold; Kathleen Mills' embroidery "pictures"; some of the pottery, including Raymond Finch's wall-pots as a relief from so much wire-work; David Pye's carved wooden bowls; and a scarf by Joyce Coleman subtly interweaving vivid colours reminiscent of the recurring Neapolitan prototype. There are even ties which at last take account of the fact that the hairier hand-weaves are "out" even for the art boys and girls.

Some more costly heirloom pieces are included obviously for good measure—and good luck, since I suppose there are still people who put dining-tables and engraved glass in each others' stockings. But quite apart from a shopping centre which deserves to be better known, the show is a useful survey of a very varied and wide field.

ABS ANNUAL BALL

THE ANNUAL BALL of the Architects' Benevolent Society will be held at Grosvenor House, Park-lane, on December 9, under the auspices of the president of the Society, Mr. C. H. Aslin, CBE, PRIBA, and Mrs. Aslin. The ball is in aid of the Centenary Fund for Old People's Homes. Tickets, which are 45s. each and include supper, are obtainable from the hon. organising secretary, the ABS Ball, c/o C. J. Epril, FRIBA, 55, Pall Mall, SW1.

ARCHITECTS' HANDBOOK

THE "Green Book" of the Birmingham and Five Counties Association, just issued, is a most interesting record of the activities of this progressive body, past, present and future. Edited by Mr. W. M. Keesey, OBE, MC, it marks the eightieth session of the Association.

The President, Mr. S. T. Walker, MA, FRIBA, in a message, remarks that "It would seem that the tide has turned, and although many trials and tribulations remain to disturb an architect's peace of mind, he can no longer complain that his commissions are unduly blocked by licensing restrictions." What is important, he adds, is that "all conditions of architects should work to one end, which is good architecture." A valuable feature of this very varied handbook (which includes a list of members), is an index of building contractors in the area, with the categories of work in which they specialise. The address of the Association is 8, Newhall-street, Birmingham.

THE GEORGIAN GROUP

THE Interim Report of the Georgian Group for 1954 contains a report of Lord Radcliffe's admirable address to the annual meeting of members, in which he stressed the duty to make sure that we conserve the best part of our heritage and give to everyone a chance of learning

COMING EVENTS

MONDAY, NOVEMBER 22

RICS.—Discussion on "The Building Surveyor's Contribution in Private Practice and Public Service." 12, Great George-street, SW1. 5.30 p.m.

TUESDAY, NOVEMBER 23

MINISTRY OF WORKS.—Discussion on "An Approach to Lower Building Costs." Building Centre, Store-street, WC1. 6.30 p.m.

WEDNESDAY, NOVEMBER 24

ARCHITECTURAL ASSOCIATION.—"The Work of Auguste Perret," by Mr. Erno Goldfinger, LRIBA, 34, Bedford-square, WC1. 8 p.m.

ROYAL SOCIETY OF ARTS.—RSA Bicentenary Competition papers. RSA, John Adam-street, WC2. 2.30 p.m.

THURSDAY, NOVEMBER 25

INSTITUTION OF STRUCTURAL ENGINEERS.—"The Design and Construction of the Nuclear Reactor Buildings at Windscale Works, Sellafield," by Mr. D. R. R. Dick. 1, Upper Belgrave-street, SW1. 5.55 p.m.

FRIDAY, NOVEMBER 26

BIRMINGHAM AND FIVE COUNTIES AA.—"Structural Uses of Timber," by Mr. S. Woolf. James Watt Institute, Great Charles-street, Birmingham. 5.30 p.m.

INSTITUTION OF MECHANICAL ENGINEERS.—"Electric Overhead Travelling Cranes," by Mr. E. Lightfoot and Dr. B. L. Clarkson. 1, Birdcage-walk, SW1. 5.30 p.m.

to appreciate and love the values that "are not diminished by sharing." The Report also contains notes on some recent planing decisions with regard to notable Georgian buildings, a comment on the case of Iver Grove, Bucks., particulars of proposed visits in 1955, and a list of members of the Group.

VISCOUNT SOUTHWOOD

THE remarkable story of Julius Salter Elias, later Viscount Southwood of Fernhurst, who, born of humble parents and starting as an office boy in the small printing firm of Odhams, Ltd., built the business up to one of the largest printing and publishing concerns in the country (it prints *The Builder* among many other publications) is well told in the recently published biography, "Viscount Southwood," by Mr. R. J. Minney (Odhams Press, Ltd., price 25s. net).

Lord Southwood, as all who knew him will testify, was never spoilt by success. To the end he remained a modest, kindly, lovable man, deeply concerned for the welfare of others. He helped to raise over £20m. for good causes and was particularly active on behalf of the Hospital for Sick Children, Great Ormond-street. There is a memorial to him in the gardens of St. James's Church, Piccadilly, designed by Professor A. E. Richardson, RA. This biography, which is very fully illustrated, is of absorbing interest, and will be read by many outside the printing and publishing world.

FRENCH DAM DESIGN

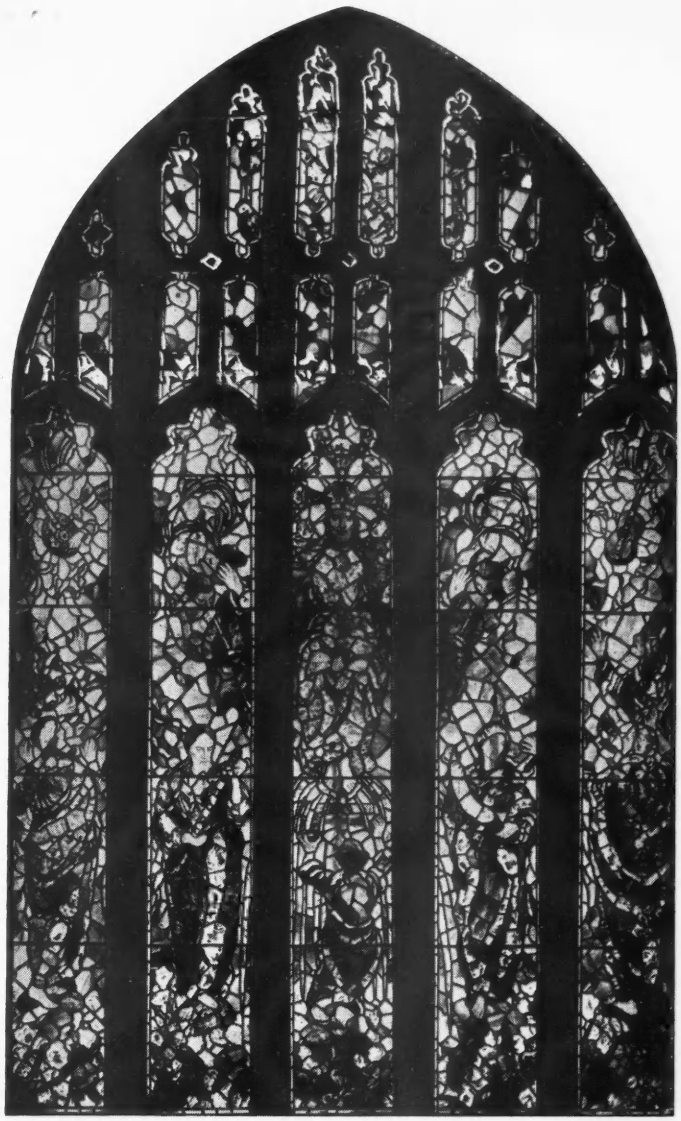
ACCORDING to an official document published in Paris, the construction of big dams is a field where the French have always excelled. From the early gravity dams to the more recent multiple-buttress and arch dams, all types of structures with one or more replicas have been built in France, some of which are still in service after more than 100 years.

The earliest dams were constructed in order to form reservoirs for the storage of water for irrigation.

Later, during the 19th century, masonry dams were built to supply the cities with drinking water. The designs of the most famous structures in that category were developed by Lampy and Grosbois, whose studies on the stability of embankments subsequently became classics in their field.

The development of hydro-electric power in the 20th century gave its true impetus to the techniques of dam construction. Skilfully utilising all the possibilities of concrete, a group of French engineers—Caquot, Freyssinet, Coyne, Lossier and others—have made outstanding contributions to river development. The 200 dams built since 1930 stand as a permanent tribute to their work and experience.

French technique is characterised chiefly by its methods in design. Since two projects are very seldom alike, French engineers are always reluctant to apply ready-made solutions. Rather, they try to adapt the project to its natural conditions, and make the best of the characteristics of the site, so as to achieve greater economy without imparing the security or beauty of the structure.



New Window for Tonbridge Parish Church

LEONARD WALKER, RI, ARTIST-CRAFTSMAN

The Gresham Committee and the City Corporation offered Mr. Leonard Walker, RI, who designed and executed this stained glass window, the free use for a month of the Royal Exchange for the purpose of exhibiting it. The window—for Tonbridge Parish Church—depicts Our Lord in Glory, with two figures blowing trumpets and two musicians. Partly shown are two prophets and Simeon and John the Baptist. Below (from left) are Mary in contemplation, a craftsman, Pilgrim kneeling at the fountain of living waters, Martha and a symbolic figure of Medicine and Nursing. At the base are garlands of flowers and in the tracery a Lamp of Truth, sky and clouds. Mr. Walker, who has done so much to rescue the art of stained glass from misuse, states that he was given a completely free hand with this window, and has accordingly been able to give to the work an enhanced jewel-like effect.

CORRESPONDENCE

"THE ARCHITECT AND LOCAL GOVERNMENT SERVICE"

To the Editor of *The Builder*

SIR,—The above is the title of a paper which was given by Mr. Leonard C. Howitt, FRIBA, to the Public Works and Municipal Services Congress at Olympia, on Tuesday.

Bearing in mind the types of people who were expected to read this paper (it was published in advance and taken "as read"), it may be regarded as exceptionally good, but there is one paragraph to which architects in private practice will take strong exception, and which reads as follows:—" . . . It is the experience of county, city and borough architects' departments that allowing for all overhead expenses as private architects would have to bear . . . the cost of equal professional services by an official department should not exceed two-thirds of the cost of the same services rendered by private practitioners. . . ."

First of all, Sir, may I point out to Mr. Howitt, that whereas his position as "the one and only" President of the City and Borough Architects' Society may give him authority to speak for that group, he has no authority whatsoever to speak for county architects as agreeing to that statement of relative costs.

Secondly, I refute as both inaccurate and misleading this statement that private architects are half as expensive again as official architects.

The "case" put up by this lecturer is woefully incomplete, as he makes no mention of the following:—

(a) The costs of superannuation, car allowances, etc.

(b) The costs of advertising for new staff, and the delay in starting them, as most architectural assistants come from other authorities and have to give long notice for leaving.

(c) The costs of staff redundancy. In lieu of dismissal they are "found" jobs in the department, and their "costs" hidden away in administration figures.

(d) Instead of the delays in waiting for a place on the office chart for the job to be worked in, a private architect can be called in at a day's notice, to start work forthwith. With the result that the job is completed a long time before the official architect would have done it.

(e) The fact that many private architects pay their staffs on a profit-sharing basis means that they will work all hours of the day and night, and thus complete their work in a shorter time.

(f) It is not possible to employ official staffs to work on this basis.

(g) It is sometimes found that by the saving of time in both the drawing stage and the period of the contract, as against rapidly rising costs of building, that it is more economical to employ a firm of private architects than to wait for the official architect to tackle the job.

Last, but not least, does not the employment of firms of private architects set up a friendly rivalry resulting in a greater variety and a higher standard of work?

SIDNEY LOWETH [FRIBA].

Hythe, Kent.

AA PRESIDENTIAL ADDRESS

To the Editor of *The Builder*

SIR,—You gave generous and undeserved space to my presidential address to the Architectural Association. But, as often happens with reporting an indirect speech, the sense suffered in parts and in one place disappeared altogether.

"It's just as well that Crystal Palace was destroyed before all these missiles started flying around!"

I said (paraphrasing a remark of V. S. Pritchett's that a sentimentalist is one who has the idea of the feeling before the feeling) that a formalist was one who had the idea of the building before the building. You reported this as "before the building *was erected*" true enough—in fact, I'd say, by Heaven, he'd *better*—but not what I meant at all!

PETER SHEPHEARD.

London, W1.

WAGES IN THE INDUSTRY

To the Editor of *The Builder*

SIR,—I have been following with particular interest the correspondence between "Dissatisfied Builder" and Sir Richard Coppock, as I have previously had correspondence with Sir Richard on this subject.

He states (your issue of November 5) that the bonus system was forced on the industry by the Government and that they also fixed the absurdly low targets. Assuming this to be correct, why did the unions accept such a miserable target? They had no need to do so. Surely their reaction should have been to increase the target, for note the wording *absurdly low*, and say, "Not on your life, we are already doing more than we are now asked to do. This is our war effort; we should hang our heads in shame if we accepted such a ridiculous figure, while hundreds of thousands of our men are overseas fighting for their and our lives." But not a bit of it, they were content to jump in with both feet and seize a golden opportunity of substantial profits on labour.

With respect to the disregarding of agreements, perhaps Sir Richard will give us more detail and say to what exactly he alludes, for one cannot imagine his Federation standing by and allowing the employers to ride slipshod and violate contractural agreements in the wholesale manner described.

It is absurd to say that speculative building is carried out without any kind of control. Has he not heard of district surveyors and building inspectors?

I am afraid Sir Richard must have a chip on his shoulder, for he blames everybody but himself, and must be allergic to the word profit. As stated before in these columns, there is nothing to prevent the unions going into business and putting all the so-called substantial profits into the pockets of the workers, for they have an ample accumulation of funds. No doubt he remembers the Building Guild that was started in Manchester after the first World War. Perhaps he will tell us why it became extinct.

Self-discipline is a noble art, and when Sir Richard can control his members to the same degree as the employers, he will have most people's blessing. Victimisation is an outstanding word in the rule book, but one has only to read the newspapers practically any day of the week to see who is in most need of self-discipline.

V. SIMMONS

Worcester Park, Surrey.

RIBA

Notes from Council Minutes

THE following notes are taken from the minutes of the meeting of the RIBA Council held on November 2:—

APPOINTMENTS:—

(a) RIBA representative on Council for Visual Education: Alan Reed (A) in place of the late E. A. L. Martyn (F). (Note: The other representative is Oswald P. Milne (F)).

(b) BSI Committees PVC/2, Paints, and PVC/2/3, Colour Schedule Cards: D. L. Medd (A).

Ministry of Housing and Local Government Housing Medals, 1955.—At the request of the Minister the following were appointed by the Council as chairmen of Regional Awards Committees:—

Regional Committee.	*Chairman.*
No. 1—Northern	C. W. C. Needham (F)
No. 2—E. and W. Ridings	Noel Pyman (F)
No. 3—North Midland	F. Hamer Crossley (F)
No. 4—Eastern	E. C. R. Sandon (A)
No. 5—London	Sir Charles Mole (F)
No. 6—Southern	J. B. Brandt (F)
No. 7—South-Western	Robert Potter (F)
No. 8—Wales	C. F. Bates (F)
No. 9—Midland	S. T. Walker (F)
No. 10—North-Western	G. Grenfell Baines (A)
No. 12—South-Eastern	R. W. Paine (A)

In addition, the following were appointed as architect members of the Awards Committee for Region No. 5—London: C. E. Culpin (F), G. A. Jellicoe (F), Anthony Minoprio (F), T. E. North (F).

Direct Election to the Fellowship.—On the recommendation of the Councils of the Royal Australian Institute of Architects and the Institute of South African Architects respectively, the following were elected to the Fellowship under the provisions of the Supplemental Charter of 1925, Section IV, Clause 4: William Thomas Leighton (A), Past President, Western Australian Chapter, RAIA; Henk Theodorus Otto Niegeman (South Africa).

R. Phene Spiers (F).—The secretary reported that Mr. Bernard Hickman, of Colwyn Bay, had presented a plaque struck in commemoration of R. Phene Spiers, FSA (F), for keeping in the archives of the Royal Institute. A letter of appreciation and thanks was sent to Mr. Hickman.

National Buildings Record.—The secretary reported that after considering representations made by a number of bodies including the RIBA, the Minister of Works had decided not to proceed with the proposal for the Ministry of Works to take over the National Buildings Record. The Council received the decision to leave the National Buildings Record as an independent body with satisfaction.

A misericorde from a Ludlow church.

CHURCH HEATING

A Review of the Whole Subject Prepared by a Committee of Architects and Heating Engineers Appointed by the Central Council for the Care of Churches

1.—*Purpose and Scope of the Report*

THE many inquiries received since the war by the Central Council for the Care of Churches, for information on church heating, have shown the need for some publication to assist in elucidating a somewhat complex subject. The Committee has endeavoured to present this report in simple terms so that (a) those who are unversed in the technicalities of the subject may learn something of the methods described; and (b) the experts may appreciate the special requirements of church buildings.

This report concerns the moderate-sized church only, whether ancient or more recent. Cathedrals and large churches on account of their size and daily use form a class of their own which is not treated here. The broad principles of heating, of course, apply to all churches, old and new, but it must be emphasised that many very special considerations arise in the case of the ancient church.

The Church of England is responsible for approximately 15,000 existing churches of varying character, 10,000 of which were built prior to the nineteenth century and the remainder during and since that time. No specific heating solution can be given to meet the great variation in the structural form of these buildings, whether ancient or modern. The nature of the construction, arrangement of the plan, height, extent of fenestration, and so on, all create different problems, whilst the relative periods of occupation and the irregularity of the intervals between them, pose the difficult questions of continuous or intermittent heating.

All this demands expert architectural advice and the subject also requires the close collaboration between the architect, the engineer and the church authorities, with, in special cases the scientist and other experts.

SPECIALISED WORK

Church heating is a specialised and relatively self-contained section of the engineer's work, and to some extent this applies to the experience required in the architect. Collaboration between the architect and the engineer is required to adjust and accommodate the peculiar needs in each individual problem, and is especially needed where an ancient church is concerned. Occasions will arise when some means must be devised to meet an overriding interest, perhaps archaeological or perhaps technical, without loss of efficiency, or to resolve the conflict between an ideal scheme and one that can be afforded either as regards initial cost or running and maintenance expense or wages for labour. Simplicity, reliability and economy should always be paramount considerations.

The Institution of Heating and Ventilating Engineers published in June, 1952 (Vol. 20, No. 202) a Symposium on Church Heating dealing with gas and electricity. From this valuable and highly technical publication and the subsequent discussions, there emerges, in spite of considerable diversity of opinion, a general agreement that electricity, while offering great possibilities for church heating, is suitable only in certain circumstances. Indeed, dogmatism on any aspect of the subject is dangerous and there is no simple formula which will cover all the problems involved.

References to costs in this report are given for guidance only and refer to those prevailing in 1954.

ACKNOWLEDGEMENTS

The Committee wish to acknowledge their indebtedness to the Building Research Station of the Department of Scientific and Industrial Research, the British Electrical Development Association, the Gas Council, the Ecclesiastical Insurance Office, various Diocesan Advisory Committees and others for their willing and helpful collaboration. They also wish to express their gratitude to Mr. S. Jewsbury, BSc, AMInstCE, AMIHVE, MRSanI, MConsE, for putting at their disposal most valuable data on the subjects included in the report, and also to Mr. W. H. Godfrey, CBE, FSA, FRIBA, for assistance with the later stages of the Report.

JOHN L. DENMAN, FSA, FRIBA (Chairman).
O. BRAKSPEAR, ARIBA. W. J. CARPENTER-TURNER, ARIBA
F. L. CHARLTON, FRIBA. REVD. CANON A. L. HOPKINS
S. JEWSBURY, BSc., AMInst.CE, AMIHVE, MRSan.I, MCons.E
S. S. JEWSBURY. G. SANVILLE, FRIBA
LT.-COLONEL B. C. G. SHORE, FIAA, FFAS, LRIBA
Members of Committee.

2.—*Architectural Considerations*

IN the Middle Ages no regular provision was made for the heating of churches, nor apart from an occasional domestic fireplace in the squire's pew does the problem seem to have been seriously considered until the nineteenth century. Any heating system in an ancient church may therefore be regarded as an addition to the fabric, and, architecturally speaking, it may be an unwelcome one. Its components may occupy valuable space, obscure architectural features, and by their nature may not harmonise with the craftsmanship of earlier periods; while if a heating system is allowed to get out of order it may increase the risk of fire or cause damage in other ways.

Pipeless systems, as applied to floor heating (when the floor has no ancient paving or inscribed stones), and other methods which can be concealed give the least interference to the fabric.

The massive yet flexible nature of early construction (before the advent of heating) made the ancient church a very durable building when kept in repair. and one that therefore is not immediately affected by the wide variations of temperature and humidity afforded by the English climate, being cool in summer and resistant to cold in winter.

DAMP PENETRATION

In an ancient church erected with thick walls, unprovided with damp courses, and with a core often loose and poorly integrated, the moisture absorbed by the walls tends to be conducted into the interior of the building through the pores of the loose textured lime plastering and lime wash dressing with which the internal faces were mostly covered; this occurs the more freely when the building is heated or when the internal temperature is higher than the external. Damp penetration comes not only through the walls but from the ground and varies in extent with the porosity of the walls and absorbency of the internal plastering where it exists. Hence the importance of ensuring that the external lime pointing should be kept in good condition, and the ground level where possible lowered below the church floor.

This form of moisture must be distinguished from condensation which occurs in some modern churches where the construction should be free from damp penetration, but in which the internal surfaces are often composed of hard impervious material such as cement mortars, cement and patent plaster, usually sealed with oil-bound paint or distemper dressing. In such cases the form of moisture resulting from heating the building and especially from sudden changes in temperature is due to the actual condensation of beads of moisture which collect and stream down the walls. The remedy lies in an appropriate treatment of the wall surface to counteract the trouble.

It should be possible to eliminate these differing moisture formations in an entirely new church where the heating system can be designed as an integral part of the fabric. Such a system cannot be readily applied to buildings already in existence, but both penetration and condensation of moisture are matters to be borne in mind in the case of all installations. (This will also be dealt with in "Alternative Systems of Heating"—Section 5 (C)).

SPECIAL PROBLEMS

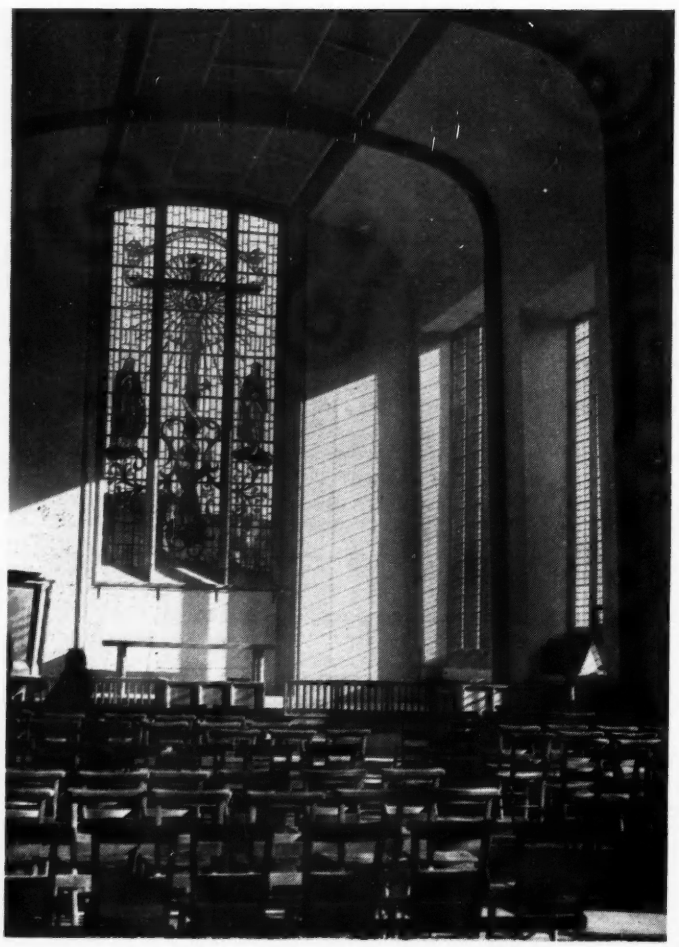
From what has already been said it will be realised that the technical problem of heating the traditional Anglican church is by no means a simple matter. Its structural character and loftiness, its plan arrangement of separate chancel and chapels, high tower arch and arcaded aisles, its internal division by walls and screens, its high ceilings or vaults and large windows, create special heating problems which become more acute from the pressure of architectural and aesthetic considerations. To the need to avoid any serious conflict between architecture and heating devices must be added the necessity to economise in both the cost of installation and the fuel and labour required to run them. Expert advice alone can achieve the preservation of all architectural amenities and the avoidance of ineffective, extravagant or disfiguring schemes.

The essential preliminary to any heating project is an accurate ground plan and section of the church showing the nature of the floor and the arrangement of the seating and other fittings. Diocesan Chancellors and Advisory Committees need such a plan with internal elevations clearly showing the heating components, supported by a drawing of any structural additions such as a heating chamber, boiler flue, and so on, and accompanied by a full specification.

In an ancient church the architect's first concern will be to ensure that the installation shall not damage or deface any part of the craftsmanship of the fabric or its fittings. If the church has exceptional character the greatest thought and care will have to be employed in deciding the kind of installation to be used. Ancient screens and other woodwork, fittings, furnishings, mural paintings, memorial tablets, tombs, floor slabs and inter-mural interments, all require most careful consideration and, where necessary, protection.

Ancient features should never in any circumstances be cut or chased to accommodate pipes or other fittings.

Full use should be made of any pipe trenches that exist. These are better covered over with material other than metal, when used to serve a new system, since metal is noisy to walk upon and, when in the form of grilles, allows dust,



St, Francis Church, Ashton Gate, Bristol, designed by Mr. Robert J. Potter, FRIBA, is heated by means of panels embedded in the floor. This type of heating in no way interferes with the appearance of a church.

which is circulated with the warm air, to collect in the trenches.

Walls will sometimes have to be drilled and flooring taken up to allow pipes to pass through or under, but if the work is ancient, care must be taken to disturb it as little as possible. For this reason the building work ancillary to a heating system should always be executed by skilled craftsmen, working under the close supervision of the architect.

It is hardly less important to ensure that the system shall not be conspicuous or unsightly. Pipes, stoves and radiators should be kept away from architectural features, such as arcades, windows and roofs, to which the eye is attracted when viewing the interior, as well as from the fittings and furniture. Heaters, for example, should never be attached to columns or to the spandrels of an arcade; high-level circulation pipes should as far as possible be out of sight; coils of pipes returning round the exposed jamb of an archway or crossing the east wall of a sanctuary are always to be avoided for the same reason; while no radiators or pipes should be in close proximity to screens, monuments or ancient seating, unless the latter are properly insulated.

Radiators against walls are liable to blacken the surfaces above them with the dust that they circulate and are best fitted with some form of shield carefully designed to deflect the warmed air. A stone shelf set in the wall above them is permanent and useful.

PATTERN STAINING

Pattern staining of ceilings is likely to be conspicuous where wide plaster surfaces occur. Since it is caused by the cold surface between rafters and joists retaining dust more readily than where the plastering is continued over the supporting members, one method of counteracting this disfigurement is to insulate the back of the ceiling between the joists.

The difficulty of placing heating elements in the choir and sanctuary can often be overcome in the case of a hot water system by embedding pipes in the floor, if this is not ancient. The choir alternatively may be served by pipes or radiators concealed in the seating, provided that sufficient insulation can be arranged to protect the woodwork from damage.

Warm air stoves, since they comprise a single unit within the church, are often less of a visual problem than pipes or radiators, but they should be provided where possible with properly built flues of brick, plastered and decorated to match the surrounding wall. (This will be dealt with in Section 6, "The Boiler House and Boiler Flue.")

Whatever system may be used to heat a church its long-term effect upon the building and its contents should not be forgotten. Corrosive effects are slow and tend to be complicated by other contributory causes. Considerable research remains to be done before our knowledge is in any way complete, but a few important facts are already sufficiently clear to enable us to be forewarned against them.

Widespread damage can be done when the gases resulting from combustion of any fuel are liberated inside a building. All stones, and particularly limestones, in which the bulk of medieval masonry and carving is executed, will disintegate, and all metals with a very few exceptions will corrode if the atmosphere is polluted in this way. The rate of decay varies, of course, with the degree of pollution and the nature of the material, but the action is similar. It should therefore be an invariable rule that no oil, gas, coal, coke, or any other fuel should be burnt inside a church without adequate ventilation or the provision of an efficient flue to remove the waste gases from each heat source.

There are other disadvantages which should be guarded against and can be countered by careful design. A heating system can cause shrinkage in timber, even where the timber may have been

A primitive means of heating a church—by means of braziers.

installed for centuries. For this reason, apart from that of appearance, pipes and radiators should be kept as far as possible from woodwork. Where they occur beneath seating, the possibility of shrinkage must receive careful consideration. It should also be remembered that the more powerful hot air stoves set up high ceiling temperatures which may cause shrinkage in a timber roof and even affect a stone vault, if not controlled.

VENTILATION

The intermittent and spasmodic heating of churches has certainly accelerated the increase of wood boring beetles by creating conditions more favourable to their growth, and, where there is abnormal dampness, has encouraged the growth of fungi. In a heated church it is therefore doubly important to provide adequate ventilation, to ensure that roofs do not leak and to see that beetles are dealt with as soon as there is any evidence of them. It is possible that dry rot conditions can be set up in lead-covered roofs by the dampness resulting from condensation on the underside of the lead. For this reason and to decrease heat loss there is a good case for providing a layer of insulating board under the lead.

In some churches the roofs have lost the plaster ceilings by which they were formerly enclosed, and heating would become a simpler matter if these ceilings were restored. In the few cases where this is desirable and possible, proper ventilation of the roof space is essential to prevent beetle and fungus attack and other deleterious effects upon the upper timbers. Ventilation of the interior of the church is always important, but if fuel is not to be wasted, ventilation must be under control through casements and hoppers fitted for this purpose to the windows or by other means and not through badly fitting and leaky leaded lights, which should be repaired to obviate not only loss of heat but also descending draughts.

The floor heating coils at St. Francis Church, Bristol, shown ready to receive "Panellite" heating covers, prior to concreting.

View of a model of the proposed scheme. Below : Site plan.

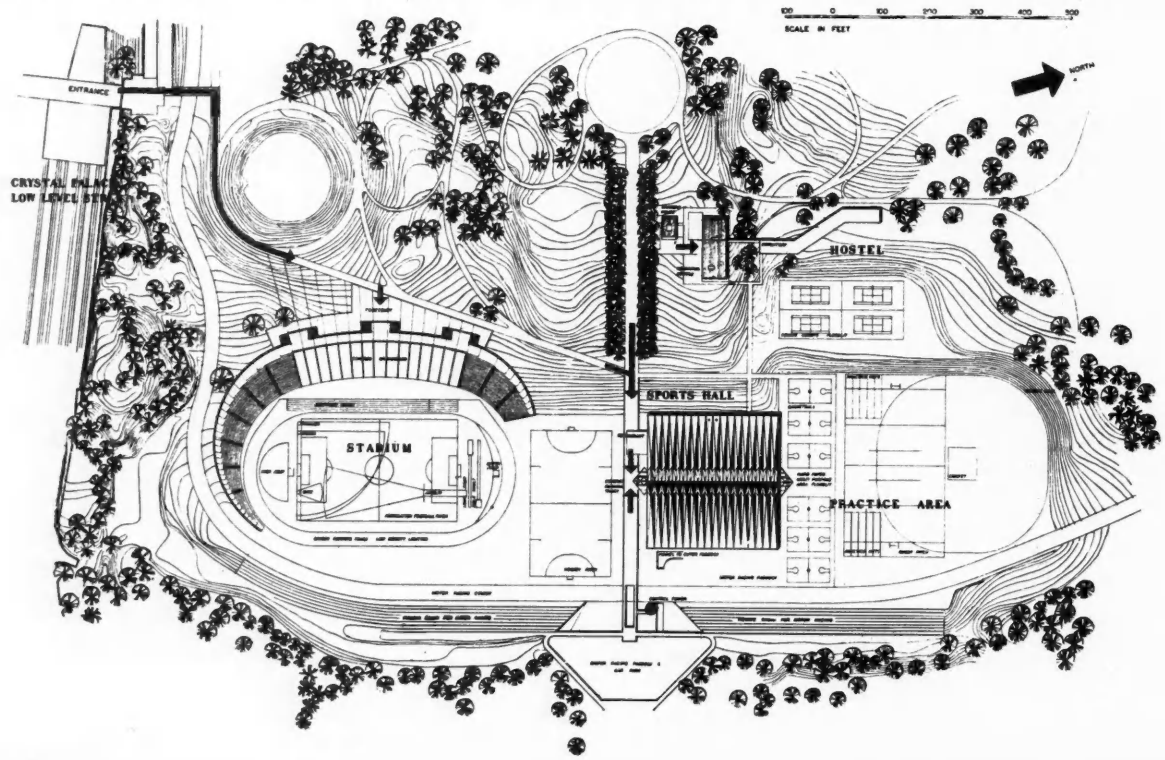
PROPOSED SPORTS CENTRE AT CRYSTAL PALACE

Architect to London County Council : DR. J. L. MARTIN, MA, FRIBA

Assistant Architects : N. W. ENGLEBACK, B. G. JONES, ARIBA, and M. J. ATTENBOROUGH, ARIBA

AMATEUR sportsmen and athletes will benefit primarily by the establishment of this proposed sports centre. The accommodation to be provided has been worked out in collaboration with the Central Council of Physical Recreation and Sir Gerald Barry is the principal consultant.

In this layout (illustrated) advantage was taken of the fact that the centre avenue is some 20 ft. above the level of the sports area. The central avenue is continued across the sports area in the form of a bridge, which provides the main public access to the sports hall. The sports hall is placed alongside this bridge. With this disposition it is possible to place the accommodation at two levels: the



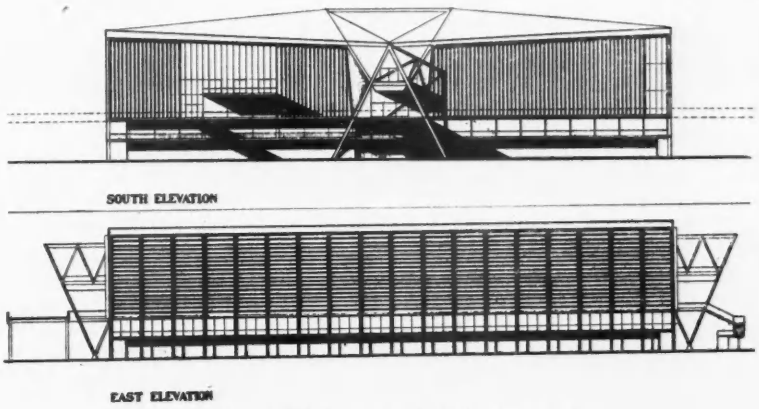
main accommodation, gymnasia, swimming bath, public galleries, restaurants, etc., being on the bridge level, and the whole of the changing-room accommodation, practice-room accommodation, etc., being at ground level, where it is related to the open area pitches, the bridge itself forming covered running tracks.

The sports hall consequently stands between the two outdoor areas, one including netball pitches, rugby and cricket pitches; the other accommodating the hockey pitch and the central arena for field events with its main stand. The hostel, which is intended to house resident athletes is sited in sloping, wooded ground, conveniently near to the main sports hall.

Main sports hall.—The public approach this building from the bridge level, as has been described, and a central area or spine across the width of the building forms the main public access and viewing area. This spine, which is planned on two levels, runs between the swimming bath on the one side and the gymnasium hall on the other. It provides access to seating for 2,500 in the swimming hall and from 1,500-1,800 in the gymnasium hall. The gymnasium hall can be divided into three separate gymnasia, or, alternatively, it can be converted into a central display area by the use of retractable seating.

Below this main floor level accommodation is provided for changing-rooms for outdoor and indoor work, with separate accommodation for swimmers. There are also four practice rooms, four squash courts, four indoor cricket pitches, a clubroom and a first-aid room. A viewing gallery for the squash courts has been arranged.

The main arena is sited on the Crystal Palace Low Level Station side of the main central bridge. Its stand is placed to the north-west, where it can be cut into the slope of the ground, thus eliminating heavy constructional work. The stand provides seating for 12,000 and in addition some 3,000 spectators could stand around the arena.



The Sports Hall : east and south elevations

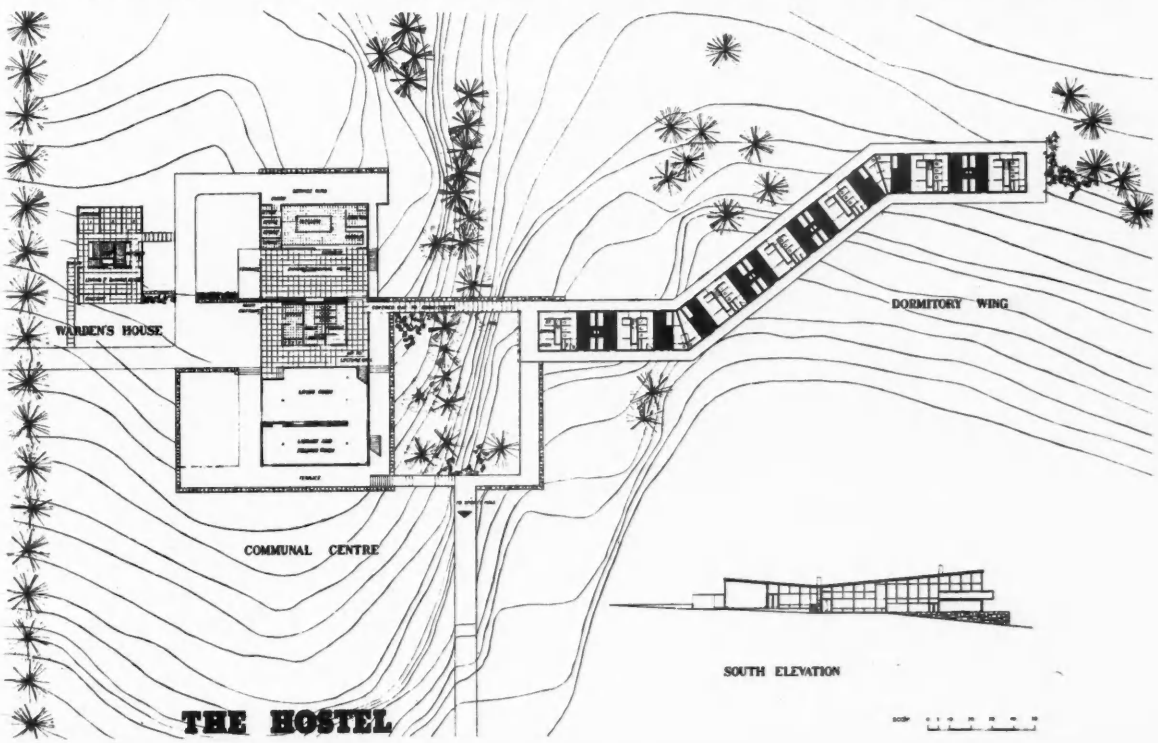
The placing of the hostel on a sloping hillside site allows an informal grouping where an effort has been made to relate the buildings closely to the landscape. The building is planned with the main dining and recreation accommodation in one block; the other block, following the contours of the land, being arranged as a dormitory wing. The accommodation in the dormitory is planned so that it can be used in the most flexible manner.

Construction of the main building.—In essence, the building consists of a flat shelf at bridge level containing the gymnasium and the swimming bath areas, with public access at different levels running across the centre of this shelf. This sub-structure and foundation is of reinforced concrete faced with brick. Advantage has been taken of this arrangement to place the main supporting structure to the roof along the line of public access in the form of a triangulated spine construction in steelwork. This gives the required overall stability and also supports the main longitudinal access ways through the building.

The roof itself consists of two wing-like structures springing from this spine. These structures, which have a prismatic form, are made up of interconnected and mutually supporting frames.

These frames are prestressed with tension ties which connect their apices across the line of the supporting spine structure. By applying a predetermined force to these ties the stress distribution within the roof structure is controlled to give the most economic use of the materials employed. The outer edges of the roof structure are given the required support by the mullions of the external glazing. The load carried by these mullions is controlled by the tension ties between the two roof sections, which are prefabricated in units and provide also the necessary insulation and internal finish.

The external screening consists of infilling panels from floor to roof formed either in glazing or in brickwork according to the need of the interior plan. Vertical external louvres are used in front of some of the glazing areas to prevent glare to spectators.



Front elevation.

"ALLIANCE HOUSE," CHRISTCHURCH ROAD, BOURNEMOUTH

Architects
JACKSON & GREENEN, F/AA.RIBA

Builders
JAMES DREWITT & SON, LTD.

THIS property in the centre of Bournemouth was purchased by the Alliance Building Society for the establishment of a branch office. The property, approximately 70 years old, had been occupied for many years by a firm of jewellers, and during that time many internal alterations had been carried out. Amongst these were shopfront alterations. On uncovering internal work, it was found that the external wall facing the main road was leaning out some 3 in., and it is still a mystery why this wall had not fallen long before.

A decision was taken to redesign the whole front, including the raising of the third floor to provide level ceilings in place of sloping ceilings with dormer windows which previously existed.

The general requirements were to form part of the ground floor as a banking hall with interview room and manager's office, etc., for the building society, and the remainder as a shop with offices and manager's flat on the upper floors.

The building society required a "visual front" permitting the interior of the banking hall to be in view of passers-by, whilst the adjoining shop required windows of the "walk round" type to afford maximum vision of the goods displayed without obstruction from any angle.

The surround to the fronts is Italian marble, and the glazing is in bronze framing. In both cases the entrance doors are armour plate glass.

The brickwork above the front has been carried out in Leicestershire buffs, and this is offset at the first floor by blue and white tile panels. Immediately above the entrance doors to the banking hall is a new electric clock (to replace the former "drum clock"). The banking hall is designed to give a feeling of space and dignity and is panelled in walnut with curved counter and specially designed filing cabinets in the same wood. The furniture is in walnut and blue leather.

Banking hall.

On the glass doors of the interview room and the manager's room the society's symbol — a beaver ("The greatest natural home builder") has been embossed, and this symbol has also been formed in the tile dado to the stair to the basement.

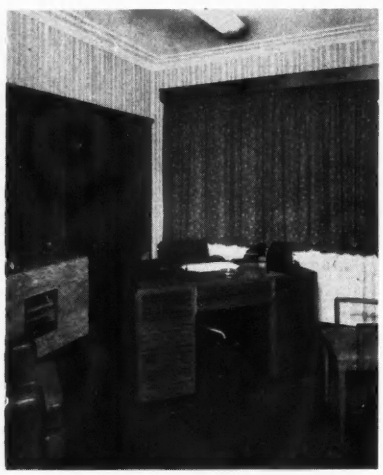
The heating to both sections is by low-pressure hot-water radiators operated by an oil-fired boiler.

The work on the site was commenced on April 1, 1954, and completed on September 22. The cost of the alterations was approximately £30,000. Following is a list of sub-contractors :

Steel, J. R. Smith, and Sons, Ltd. ; bricks, Henry J. Greenham, Ltd. ; stonework, Templeman and Son ; shop fronts, D. Drake and Son, Ltd. ; panelling and fibrous plaster ceiling, H. H. Martyn and Co., Ltd. ; heating, Young, Austen and Young, Ltd. ; electrical work, H. J. Galliers ; clock, English Clock Systems, Ltd. · flooring to banking hall, Southern Tiling ; tiling, Carter and Co., Ltd. ; concrete pavement lights, J. A. King and Co., Ltd.

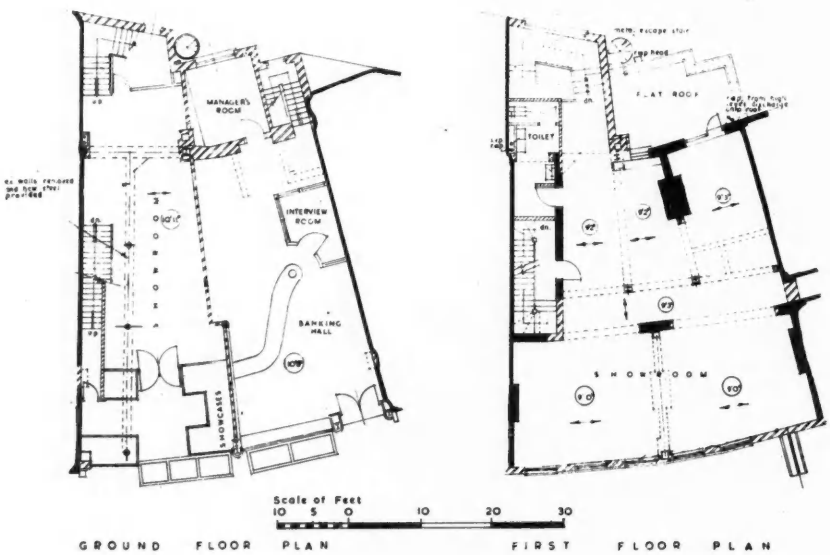
View of banking hall from the entrance.

Another view of the banking hall.



Manager's office.

"ALLIANCE HOUSE," CHRISTCHURCH ROAD, BOURNEMOUTH



"TOWNSON" HOUSES: A SCHEME FOR LEYLAND UDC

Architects to the Sponsors

GRENFELL BAINES & HARGREAVES, AA.RIBA

Engineer & Surveyor to Leyland UDC
F. D. HOWE, MIMunE

Sponsors of the Scheme
WILLIAM TOWNSON & SONS, LTD.

RECENTLY 108 houses were completed for the Leyland Urban District Council in Lancashire just under 12 months after work started on a site where a separate road and sewer contract ran concurrently with house construction. The houses were built by the "Scotcon" method of precast concrete slab construction evolved by the Scottish Construction Co., Ltd., who have built many thousands of houses of this type in Scotland.

As the slabs are designed to form load-bearing walls no structural frame is necessary. Thus the simplicity associated with traditional building is achieved while the advantages of prefabrication are retained.

Although it cannot be claimed that the system represents a revolutionary development in prefabrication, surprising results in reducing site hours were obtained on the very first contract, particularly in the early handing over of completed houses—less than three months after the site was available for stripping the first pair was complete, erection having taken two months ; it is safe to say that given better access over the site the 108 houses could have been finished at an average rate of 12 per month.

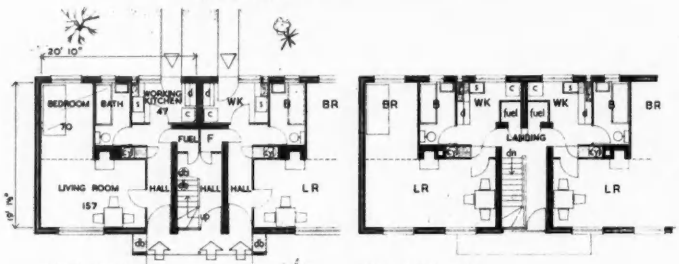
A number of factors, apparently small in themselves, have contributed to the success of the method and these will be mentioned as the system is described. The account will also retail some lessons learned during early experiences, again none of them appearing significant alone, but together of great importance. Indeed the whole experience of improved rate of construction and smoother running at site may be likened to the effect of a few drops of oil on a rusty machine.

Construction.—Foundations are of conventional construction, as yet the best method of overcoming the enormous and inevitable variations in site levels and conditions. Floor level is datum and up to here the external and party walls are of brick cavity construction on concrete foundations ; thicknesses of brickwork or fine concrete filling of external walls is determined by the amount of dry fill required to suit ground levels. A concrete ground-floor slab 3½ in. thick is poured on to 4 in. of consolidated hardcore, the whole fitting between the cavity base walls.

Walling.—From the ground-floor slab, construction starts with a base bonder course laid on dpc which is carefully lapped on to the slab under the waterproof floor finish, thus ensuring continuity of resistance to rising damp.

In addition to providing a true and stable base for the prefabricated slabs above, the base bonder forms visually a plinth acting as a finish to the base walls and a starting line for the superstructure.

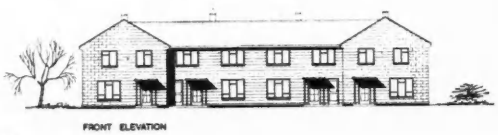
FRONT ELEVATION



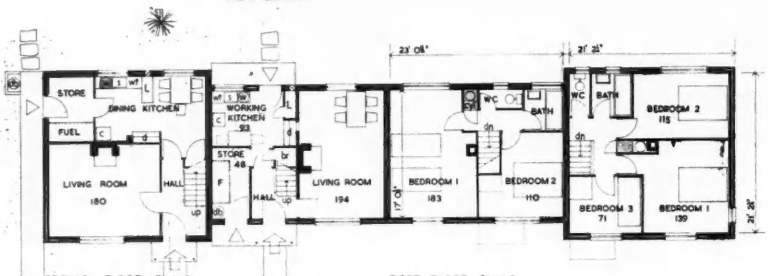
GROUND FLOOR PLAN FIRST FLOOR PLAN

FLAT TYPE F/1/1/O/MT

ONE BEDROOM ONE PERSON ALL ASPECT TERRACED



FRONT ELEVATION



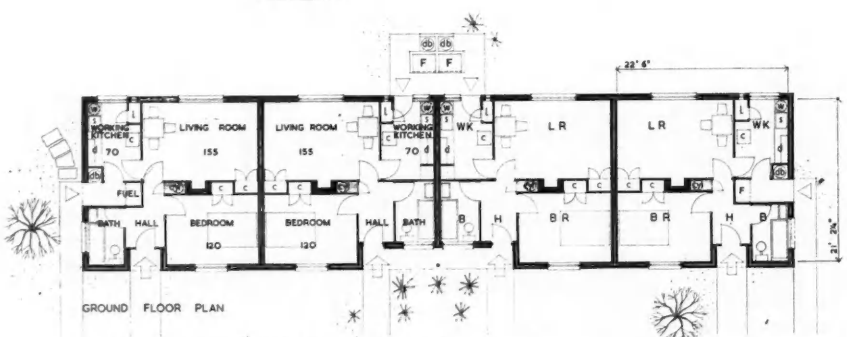
GROUND FLOOR PLANS FIRST FLOOR PLANS

HOUSE TYPES H/3/S/ET & N/2/O/MT

THREE BEDROOM FIVE PERSONS SOUTH ASPECT SEMI DETACHED

TWO BEDROOM FOUR PERSONS ALL ASPECT TERRACED

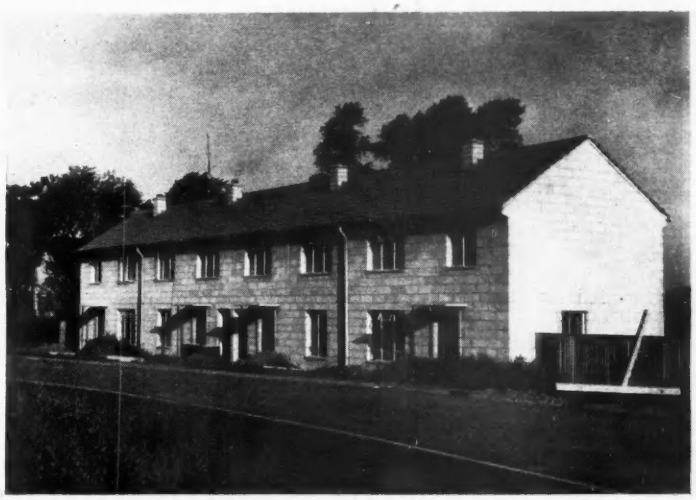
FRONT ELEVATION



GROUND FLOOR PLAN

HOUSE TYPES OP/1/2/E/ET & OP/1/2/E/MT

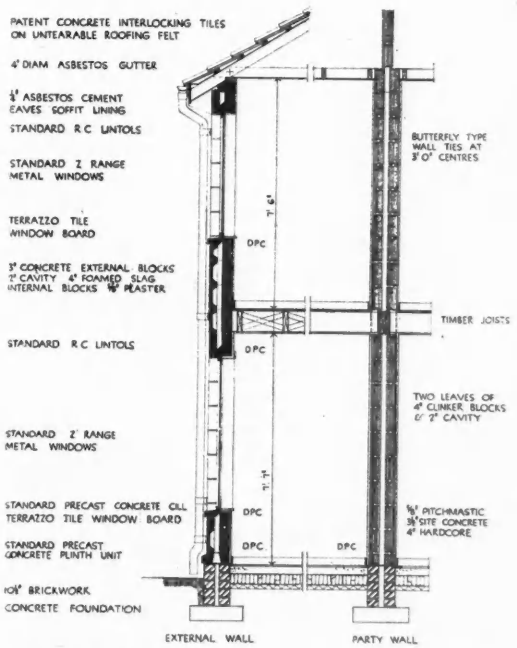
OLD AGE PERSONS' DWELLINGS



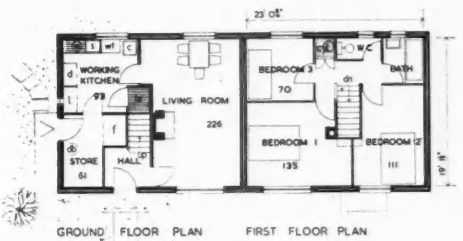
"TOWNSON" HOUSES FOR LEYLAND UDC

Standard slab construction now follows from base bonder to eaves. External and party walls are cavity, each unit of the former being tied across the cavity for stability; in the party wall, ties are widely spaced to minimise sound transmission. Outer slabs are 3 in. thick with hollowed inner faces and interlocking "V" joints; inner slabs are 4 in. thick load-bearing and insulating foamed slag or clinker concrete to BSI specification. Non-load-bearing slabs are 2½ in. thick.

The external leaf is manufactured off site under closely controlled factory conditions by a process giving a stone textured monolithic block with an integral bond between the texturing material and the mass of the block. Various types and colours of finishes are available. At Leyland site, Hopton Wood limestone aggregate, with an amount not exceeding 10 per cent. by weight of natural earth pigment added to the cement, was selected as the type of finish to the external walling; houses which have now weathered


PATENT CONCRETE INTERLOCKING TILES ON UNTEARABLE ROOFING FELT
4" DIAM ASBESTOS GUTTER
¼" ASBESTOS CEMENT EAVES SOFFIT LINING
STANDARD R.C LINTOLS
STANDARD Z RANGE METAL WINDOWS
TERRAZZO TILE WINDOW BOARD
3" CONCRETE EXTERNAL BLOCKS 2" CAVITY 4" FOAMED SLAG INTERNAL BLOCKS ½" PLASTER
STANDARD R.C LINTOLS
STANDARD Z' RANGE METAL WINDOWS
STANDARD PRECAST CONCRETE CILL TERRAZZO TILE WINDOW BOARD
STANDARD PRECAST CONCRETE PLINTH UNIT
10½" BRICKWORK
CONCRETE FOUNDATION
BUTTERFLY TYPE WALL TIES AT 3'0" CENTRES
7'6"
DPC
TIMBER JOISTS
DPC
TWO LEAVES OF 4" CLINKER BLOCKS & 2" CAVITY
7'1"
DPC
½" PITCHMASTIC 3½" SITE CONCRETE 4" HARDCORE
DPC
DPC
EXTERNAL WALL
PARTY WALL

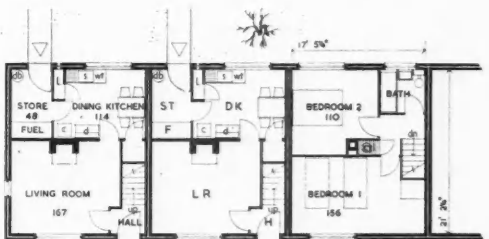
TYPICAL CROSS SECTION



GROUND FLOOR PLAN FIRST FLOOR PLAN

HOUSE TYPE L/3/5/O/ET

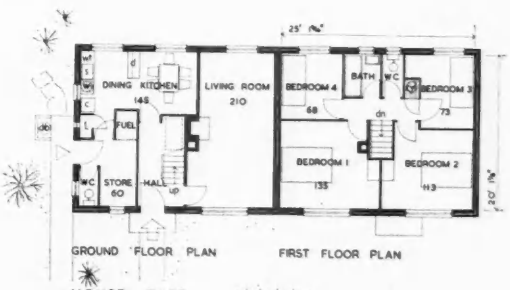
THREE BEDROOM FIVE PERSONS ALL ASPECT SEMI-DETACHED



GROUND FLOOR PLAN FIRST FLOOR PLAN

HOUSE TYPE Q/2/4/S/MT

TWO BEDROOM FOUR PERSONS SOUTH ASPECT TERRACED



GROUND FLOOR PLAN FIRST FLOOR PLAN

HOUSE TYPE F/4/6/O/ET

FOUR BEDROOM SIX PERSONS ALL ASPECT SEMI-DETACHED

for over 12 months have a pleasing appearance.

One of the principal objects in designing the Townson house was to reduce to a minimum the number of block sizes required to allow maximum freedom in planning to Housing Ministry requirements. Only four standard block sizes are used.

Internal Walling.—Apart from the use of slab materials, internal walling follows traditional methods. In addition to cavity party walls the floor rafts of individual houses are separated by cavity walls carried down to foundation level and where ends of first-floor joists are carried on a party wall leaf the ends in the adjoining house are separated by a 4 in. block course affording fire as well as sound resistance.

At first every endeavour was made both in detail design and execution to use dry techniques for internal surface finishes. Plasterboard with scrimmed and taped joints on timber battens, or heavy duty asbestos board, replaced plaster, but while certain advantages in speed of following trades were observed, it was decided early on to return to conventional two-coat plasterwork with skim to ceiling boards. Although involving slight delays during the winter months, the cleaner, sounder and slightly cheaper job has proved the better alternative, while being less costly to maintain.

Roofs.—For simplicity of construction and better appearance roofs are gable ended. They are carried by trussed rafter construction, supported on the external walls; thus all first-floor partitions are non-load bearing. Roof finishes may be varied, standard being interlocking concrete tiles on battens over untearable roofing felt carried down into gutters.

The pitch of 31½ degrees allows for a standard stepped block which bonds easily with standard slabs below.

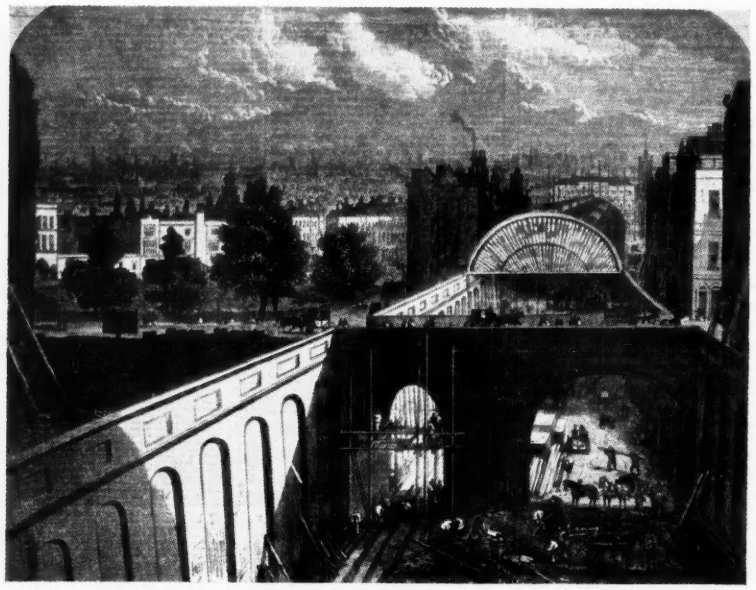
General.—Other internal finishes and requirements are dictated by the client's preferences which in turn are largely dictated by economics. The design can accommodate almost any type of finish and all plan types employ the central fireplace principle affording maximum warming capacity out of whatever heating unit is used and making the use of simple central heating worth considering.

Planning positions of heating unit, hot water storage, bathroom and kitchen ensure direct and largely internal lines for pipe services. Trouble with frozen pipes should be rare. Internal plumbing for wastes on the single-stack system is an available standard feature. Another optional feature is the glass wool insulating quilt over the first-floor ceilings.

Following is a list of sub-contractors engaged on the Leyland project :

Plumbers, H. Tattersall, Ltd., Rochdale ; roof tiler, Wm. Altham, Bolton ; joinery (part), South Yorkshire Woodworking Co., Ltd., Doncaster ; painting (part), Arnold Sharrocks, Ltd., Preston.

Nominated Suppliers.—Sanitary fittings, Samuel Gratrix, Ltd., Manchester ; fireplaces, Forrest and Crabtree, Ltd., Blackburn; ironmongery, Lockerbie and Wilkinson, Ltd., Tipton, Staffs ; garages, Ernest Batley, Ltd., Holbrooke, Coventry. William Townson and Sons, Ltd., carried out the asphalting, electrical installation, plastering and part of the joinery and painting.



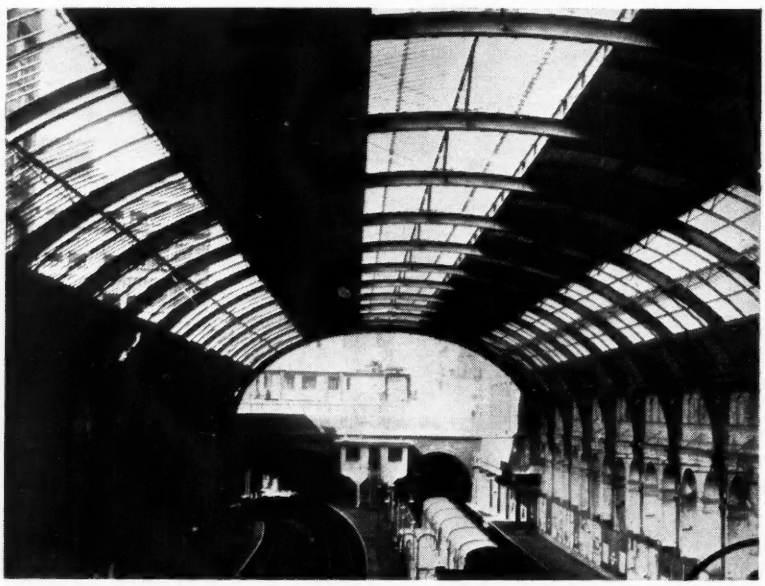
A drawing made in 1865 *(looking east) during construction of the City Widened Lines, showing Aldersgate Station in the background. The bridge over the tracks carries Hayne-street, and on the left is Charterhouse-square.*

CITY LANDMARK TO GO

THE removal of the 91-year-old arched roof above Aldersgate Station, due to begin almost immediately, will cut a link with the earliest days of London's underground railways. When the station came into use in 1865 it was described as one of the finest in the Metropolis, the station's 308-ft. long light ornamental iron and glass roof spanning 80 ft. across four tracks and three platforms, and covering some 26,000 sq. ft. This was due to the fact that the extension of the Metropolitan Railway from Farringdon to Moorgate coincided with the construction of the City Widened Lines, designed to link St. Pancras and King's Cross with the City.

Removal of much of the original roof covering owing to war damage has contributed to the deterioration of the ironwork. It is, therefore, necessary to dismantle it, and a contract for this work has been let to the Demolition and Construction Co., Ltd. Each arch rib weighs 3.7 tons.

Low-level roofing is to be provided over the platforms until such time as the re-planning of the surrounding area is settled.



Aldersgate Station as it is to-day (looking westwards). The City Widened Lines are on the left and the Circle Line on the right.

"FIXINGS"

into

STEEL — BRICK — CONCRETE

the

Tornado

high-speed cartridge hammer

does

MORE WORK

with

LESS EFFORT

in

LESS TIME

RESULT — 30% COST, 75% TIME } *SAVED!!*

PRICES FROM £33 . 5 . 0 FOR COMPLETE KIT IN CASE

A WELCOME AWAITS YOU AT ***STAND No. 146***

PUBLIC WORKS EXHIBITION

Nov. 15 - 20

DEMONSTRATIONS AND ADVICE GIVEN FREE AND WITHOUT OBLIGATION ANYWHERE

ROURA & FORGAS LTD.

COLQUHOUN HOUSE, 27-37, BROADWICK STREET, LONDON, W.1

Telephone: GERrard 9641-8 Telegrams: Colleague, Piccy, London

At No 41—

—the home of all that is best in modern building practice.
The accumulated experience of over 60 years' service is at your command.

MULLEN & LUMSDEN Ltd.

Contractors

No 41 · EAGLE STREET · HIGH HOLBORN · LONDON · WC1

CHANCERY 7422-3-4

SMALL WORKS DEPT:
COPTIC STREET, LONDON, W.C.1
MUSEUM 3705

SOUTHAMPTON:
151 ROMSEY ROAD, SHIRLEY
SOUTHAMPTON 73176

JOINERY WORKS:
GRESHAM WORKS, SOUTH NORWOOD
ADDISCOMBE 1264

Reconstruction in London

A TALK AT THE ARCHITECTURAL ASSOCIATION

AT an informal meeting of the Architectural Association, held at 36, Bedford-square, WC1, on November 3, MR. PERCY JOHNSON-MARSHALL, ARIBA, AMTPI, spoke about the reconstruction now taking place in London. Mr. Peter Shepheard, ARIBA (president), who was in the chair, said that Mr. Johnson-Marshall spoke in his personal, and not his official, capacity.

He (Mr. Johnson-Marshall) said that the pre-war MARS Group Plan had been entirely unofficial, prepared by keen architects, mainly as a propaganda study; but it had been extremely important. Then had come the blitz with the destruction of many buildings, and this had given the planners their opportunity. In the County of London Plan they had done a tremendous job. They had prepared a plan containing bold and comprehensive proposals, but they encountered certain difficulties because they could not deal fully with finance, timing and the hundred and one other things with which an official plan had to be concerned.

Under the Planning Acts, the Government had made grants enabling local authorities to acquire large blocks of land, and the LCC had thus been able to make a start after the war on implementing the plan. By the beginning of 1949, when he came on the scene, the Stepney-Poplar Reconstruction Area had been designated and approved, and the reconstruction group was then set up in its present form within the town planning division of the architect's department. Its first special priority job was Lansbury, and the second the South Bank, but it was given eight comprehensive development areas in all, and a large amount of work has been done on them.

DEVELOPING A PLAN

It was important to remember that the LCC had a large number of departments, and the procedure involved in preparing a plan and putting it into execution was worth mentioning. Every single action had to be taken by means of reports to various committees, and in a neighbourhood where there were houses, open spaces and schools, four or five committees would probably be concerned, the finance committee along with the others. The architect's department, too, was not the only one concerned; there were also the controllers, the chief engineer's, the valuer's and others.

It was necessary for the staff to co-ordinate ideas before schemes were submitted to committees. The LCC committees made their decisions but beyond them were the Government Departments. Nothing could be done until the money was forthcoming from the Treasury, and the Treasury acted on planning generally. Among other authorities which had to be consulted were the General Post Office, which was interested in the siting of post offices and the laying of cables, the London Transport Board for underground railways, bus routes, etc., and the boards controlling gas, electricity, water and railways (other than those underground).

Then there were the borough councils doing 50 per cent. of the housing, and with powers over street lighting, minor roads, etc. Finally, there were various voluntary bodies. Altogether, the time between first conceiving the idea and actually getting a brick on the ground was apt to be long, and one difficulty was to keep a continuation of thought over the necessary period. The War Damage Act, the Distribution of Industries Act, and other legislation had to be kept in mind. There were technical problems concerned with applying planning principles of such matters as density, floor space, types and distance of open spaces, shopping centres, and these had all to be considered at each scale and stage of the plan.

A very important matter was that of trying to explain to people generally what planning was about and how it would make their lives happier. It was vitally important to get people to interest themselves and learn how planning affected them socially and economically. At one time he had felt that architecture was the centre of the drama, but he later saw that people were the centre and architecture the setting.

ISOLATED SITES

War damage often consisted of small isolated plots so that no large-scale reconstruction could be carried out at once, and where a large area was to be cleared there were always blocks of property that had been left standing, and it took time to get rid of them. Plans must be comprehensive, but they must be flexible.

The lecture was illustrated throughout by the magic lantern. The slides showed the various plans prepared for the County of London as a whole and for reconstruction areas within it, while coloured photographs showed work done and in progress.

A member of the audience said he had been interested to see the MARS Plan, but as the lecture proceeded, it showed the sort of obstacles the planning came up against, and the MARS diagram had become progressively more academic as the lecture went on. When the County of London plan was shown, it appeared that there was but little relationship between it and the MARS Plan. Having regard to all the obstacles and the spots of bad development, it was very important to have a clear idea of what the ultimate plan should be. Otherwise you got lost. What sort of diagram was most useful? One like the MARS Plan or some other form more closely related to reality?

The lecturer replied that diagrams of different kinds were needed. At certain times you wanted to get people interested in the idea that something should be done; at that stage it was important to have an imaginative diagram to present ideas and be a symbol. At the next stage you had a more careful examination of the problem, you dealt with the real facts but left out finance. Thus you got an idea of the application of principles to your problems. Then you got further and further until you got to the building. The final plan should be something possible under existing conditions.

The president said that the MARS Plan was an example of the fact that the best might be the enemy of the good. A visionary plan might take people's minds off what was possible, and, knowing that the plan could not be carried out, instead of becoming enthusiastic for planning, they passed it over.

The lecturer said that in taking a site you should use your imagination, but when showing your preliminary ideas to the public you should not say that they could all be carried out. You should make it clear that present conditions made some things unrealisable, although the community would benefit if those things were done.

PEOPLE'S REACTIONS

A question was asked about the reaction of the inhabitants to their new surroundings.

The lecturer said that there was such a great pressure that people were pleased to get any accommodation. A second thing they appreciated was the provision of schools, shops, cinemas, etc., in the right place and the schools being provided with decent playgrounds. But you got varying sorts of reaction. In one case a terrace of houses was put up where there was an old tree, Mr. Shepheard had made great efforts to preserve that tree and had succeeded. But when a tenant moved in the first thing he did was to get rid of it.

The president said the people were delighted to live in what was so much better than what they had known. The difficulty was often with responsible people. The London County Plan was not a thing architects tended to get excited about. They were more attracted if somebody produced a plan for a 30-storey block with a helicopter landing space on the top. There were two ways of looking at an architectural scheme, and one way was ideal but was misleading. The approach you needed in building was to take the best you could get at the time and make the best of that. That was the action taken in the lecture, combining what was possible with the long distance ideal, and knowing what you could do at the moment. Architects should support the work of the County of London Plan more fully than they generally did, and this notwithstanding its slowness and lack of imagination. He had been impressed with the work the students of the AA were doing with the LCC. It seemed to him first-class because it helped the LCC to see a number of architectural possibilities, and it was good for the students to feel that they were getting a real problem. How did Mr. Marshall feel that this ideal could be developed?

The lecturer said it was up to the AA to get together with people who would like to collaborate and develop in various ways. A joint scheme might be evolved for schools and so on. Architects were trying to make a better place for people to live in, and there were times when they should get together for co-operation as a whole. They should think of themselves more as a team, which was the policy in his office.

News of the Week

ARCHITECTURAL STAFF

IN view of difficulties being experienced in the borough engineer's department because of shortage of technical staff, the establishment committee of St. Marylebone borough council have considered the employment of independent architects, surveyors and engineers.

In a recommendation to the council, they state that they are against the engagement, as a normal practice, of independent architects and surveyors on the preparation of estimates and specifications for work in connection with the council's properties, but they approve of the employment of outside architectural and surveying staff on special jobs during periods when the borough engineer's department is below establishment. A similar recommendation concerns the employment of engineers.

BRISTOL CHURCHES

THE journal of the Bristol and Somerset Society of Architects for September has for its main feature an illustrated article, by Mr. Donald W. Insall, on "Bristol—City of Churches." The City Council has decided that as many as possible of the bombed churches shall be saved and held in public trust. Following is a summary of the decisions:

(1) Tower and site of Temple Church to be preserved, the Ministry of Works being approached regarding repair and future maintenance.

(2) Tower, spire and crypt of St. Nicholas's to be preserved. (The future of the damaged body of the church is still in the balance.)

(3) St. Augustine's to be demolished, and the site acquired.

(4) The City to have the opportunity of purchasing existing towers and buildings of St. Mary-le-Port and St. Peter's, provided that the problem may be freely considered on its merits when the site is eventually re-developed. Estimates for repairs and maintenance to be submitted.

The journal is issued from 25, Great George-street, Bristol 8.

ONE-DAY ARCHITECTURE

THE Deputy City Architect of Birmingham, Mr. J. R. Sheridan-Shedden, ARIBA, acted as guide during a one-day school of architecture organised by the Birmingham University Extra-Mural Department on November 6. New schools in Birmingham and district were the main centres of interest, several being visited by those taking part in the course. The subjects for later one-day courses will be pre-war civic architecture in Dudley, post-war building in Coventry, modern churches in the Black Country, and Nonconformist church architecture in Birmingham.

WESTMINSTER ABBEY MEMORIAL

A MEMORIAL to Britain's first printer, William Caxton, was unveiled at Westminster Abbey on November 12.

In the siting of this memorial the Dean and Chapter have been guided by recent researches in the large collection of medieval manuscripts in the Abbey Library, which revealed a rent roll establishing more or less definitely the position where the first printing press was built. The memorial is also designed by the Abbey as a gesture of thanks to the Press of the English-speaking countries throughout the world for their assistance in the appeal made last year for £1m.

Medieval documents have shown that William Caxton set up his first printing press about 1477 in a house which appears to have been near the Chapter House and the old Lady Chapel, rebuilt some years later as the Henry VII Chapel. According to the old rent roll, Caxton rented this house from the Abbey for a yearly payment of 10s.

THE CITY FLOODLIT. A view of Watling House in Cannon-street, with St. Paul's Cathedral in the background, taken last week on the occasion of the tour of City building sites carried out by the retiring Lord Mayor, Sir Noel Bowater, on the evening before the Lord Mayor's Banquet at Guildhall. Many new building sites were floodlit for the Banquet, following Sir Noel Bowater's suggestion to the LMBA that London's builders should take this opportunity to show the world what they are doing in rebuilding the City.

APPOINTMENTS

MR. DONALD A. SHANKS, ARIBA, has been appointed education architect to the City of Belfast in succession to Mr. R. S. Wilshere, FRIBA, FRICS, who is retiring.

MR. DENNIS PILLINGER has been appointed chief assistant to the county architect of Hampshire. He served previously with East Suffolk County Council and Pembrokeshire County Council.

ARCHITECT RESIGNS

MR. SAM BUNTON, LRIBA, Glasgow architect and town planning consultant with Clydebank Town Council since 1942, has resigned from this position due to health reasons.

CRYSTAL PALACE APPROVAL

THE scheme to develop part of the Crystal Palace site as a national youth and sports centre at a cost of £1,797,000 was approved unanimously by London County Council on Tuesday. The scheme is illustrated on page 818.

SCHEMES FOR NEW ROADS

TWO PAPERS which gained prizes in the Royal Society of Arts Bicentenary Competition, "Life in the Year 2,000 AD," will be read at a meeting of the Society to be held on November 24. The papers are (1) "A Scheme for Rooftop Roadways," by Wing-Cmdr. T. R. Cave-Browne-Cave, CBE, and (2) "A System of Underground Roadways for London," by Mr. C. E. H. Watson, BSc.

ARCHITECT'S ESTATE

MR. FRED VAUX, FRIBA, of Belle Vue-crescent, Filey, and formerly of Sprotborough-road, Doncaster, who had practices in Filey and Bridlington, left £22,429 (£22,104 net). Duty paid was £2,802.

PROFESSIONAL ANNOUNCEMENT

MESSRS. A. L. CURRIE AND BROWN, chartered quantity surveyors, have moved to 11, Woodside-place, Glasgow, C3. Tel. (unchanged): Douglas 1151.

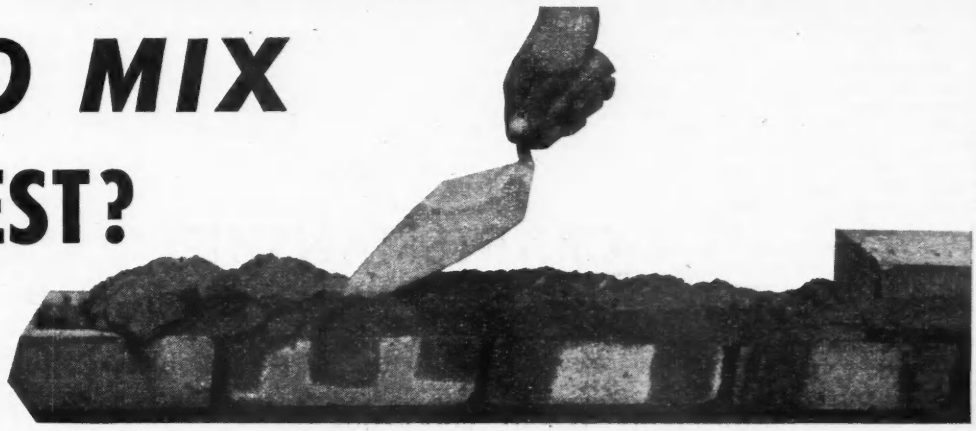
FROM "THE BUILDER" OF 1854

Saturday, November 18, 1854

ARCHITECT AND HORSE DOCTOR.—I send you a copy of an advertisement from a Cambridge paper for the benefit and edification of the building world, and architects in particular:—John Noakes, certified member of the Royal College of Veterinary Surgeons, London, begs to thank his friends and the public for their liberal support during 14 years' residence in Ely, and assures them he still continues to practise the veterinary art, contrary to reports set abroad by farriers and empirics. He also states that to the above profession he has added that of architect, surveyor, and builder, and will be happy to produce high testimonials as to qualification in either professions.

HAVE YOU TRIED THE

TWO MIX TEST?



Write to us for a free sample of FEBMIX ADMIX and carry out the following two mix test—

MIX No. 1:—PREPARE THE MORTAR MIX YOU NORMALLY USE FOR BRICKLAYING AND PLASTERING WORK.

MIX No. 2:—PREPARE A MIX COMPOSED OF 6 PARTS SAND TO 1 PART CEMENT PLUS FEBMIX ADMIX.

You will find that Mix No. 2 will spread better and faster, that it 'hangs together' well and adheres firmly. It will resist rain penetration and frost attack, and is not prone to cracking and crazing—it will also cut your building costs—each one gallon of FEBMIX ADMIX costing 7/- saves 800 lb. of lime or 8 cwt. of cement.

IT PAYS TO USE

FEBMIX ADMIX (PATENT APPLIED FOR)
MASONRY MORTAR

Write for free sample

102 KENSINGTON HIGH STREET, LONDON, W.8 Phone: Western 0444

FEB (GREAT BRITAIN) LTD.

ALBANY ROAD, MANCHESTER, 21. CHORLTON-CUM-HARDY CHO. 1063

FALKUS
BROS. LTD.

BUILDING CONTRACTORS

CRAFTSMANSHIP
THROUGH APPRENTICESHIP
is our watchword and to do things finely and thoroughly is our endeavour.

The FALKUS ORGANISATION
has achieved in no small degree the satisfaction which derives from good workmanship and a worthy Clientele gives hearty assent.

46 · BISHOPSGATE · E.C.2

Telephones:

London Wall 1876 Bishopsgate 3381-4 (4 lines)

Telegrams:

"Falbrowok, Spimark, London"

"FIFTY YEARS OF BUILDING EDUCATION"

Brixton School of Building's Exhibition

AS part of the celebrations marking its half-century, staff and students of the Brixton School of Building have mounted an exhibition at the Building Centre, where it continues until December 1 after its opening by the Minister of Works on November 11.

We have recently had a number of exhibitions which bite off about as much as they, and we, can chew. This is not necessarily a bad thing—in this case the chewing is courageous and conscientious and mental indigestion avoided—but it does present certain problems to both organisers and viewers in relation to the limitations of purely visual presentation. One of them is that of evolving a thematic treatment which can be grasped and followed through by an assorted "audience." Another is the raising of some basic questions which the organisers themselves cannot answer, but may be criticized for apparently begging.

There is too much to say about anything connected with building and, for purely optical reasons, written words do not go well with pictures when a story has to be told on screens. Until a method analogous to the "talkies" can be evolved—for precisely the same reasons, if the distracting effect of subtitles be remembered—architectural and building exhibitions must remain inadequate to an art and craft in which the visual aspects of the end-product are virtually incidental, and much is to be explained.

One has seen, and helped with enough exhibitions, to know the difficulties well: I had my say elsewhere about the experiment at Willesden last February on a similar theme, which I felt fell short of the target in view of its title, "Building Today." One can award a hit to Brixton for showing the reflection in building education of successive developments in *technique*. To say that it does not quite reflect the impact of those developments upon architectural *design* is to express regret rather than criticism, which will be shared by others who think that you cannot engage in the one without becoming involved in the other, and that the different "language" of each is to be deplored.

INFLUENCES ON TRAINING

This exhibition altruistically presents not only the work of Brixton, but all the factors which have influenced the training system generally adopted in the industry. The period under review is conveniently divided into three parts—1904-19, 1919-39 and 1939-54, illustrated by typical buildings and other context. It suggests that, although the range of subjects covered has not materially increased, the going is tougher in each—which will evoke lively fellow-feeling in the architectural students who I hope will visit it. It shows not only what is being taught, but how, in well-chosen photographs and other documentation, some of which is of considerable archival interest, and is supplemented by models and paper "sculpture."

In some of the *tours de force* of craftsmanship, however, my point is illustrated. Those of 1904 reflect the taste as well as the technique of the day: although the counterparts for later periods are omitted, one suspects that they might not. The young architect has accepted the need to make an acceptable (but not necessarily silk) purse out of a synthetic sow's ear, but is not the young builder being encouraged to hanker for past standards of craftsmanship simply because he is confronted with past standards of taste?

Except for offering encouragement on this point, the Brixton School's manifesto succeeds. Presentation is excellent, though some of the display tends to swamp the objects displayed. Otherwise, almost professional finish avoids the amateurish look, out of place in a public gallery, though appropriate perhaps to school premises where, in an ideal world, all school exhibitions should be held.

BASIL MARRIOTT.

BRIXTON SCHOOL DINNER

Fiftieth Anniversary of Opening

A JUBILEE DINNER to celebrate the fiftieth anniversary of the opening of the Brixton School of Building was held by the School's Association at Grocers' Hall, Prince's-street, EC2, on November 12. Guests were received by Mr. D. A. G. Reid, principal of the school and president of the association, and Mr. H. J. Adams, chairman of governors. Mr. Victor Mishcon, DL, JP, chairman of the London County Council, presided.

Proposing the toast "The Building Industry," MR. C. H. ASLIN, CBE, president, RIBA, said that the architect in his young days held himself aloof from the building trades and was regarded as a sort of demi-god. He said that the salvation for the building industry now lay in co-operation, and emphasised the need for the close alliance of everyone concerned in building. Mr. Aslin continued, "We now have sufficient sense to know that operatives, craftsmen, employers, employees and associations all have something to offer, and with co-operation we can produce better buildings at less cost."

MR. D. A. G. REID proposed the toast "The Guests" and said that the Jubilee celebration provided a great opportunity for looking back and marking progress. He expressed pride in the association of the school with the guests of the evening. "The London County Council has supplied our motive power; for advice we have gone to the Ministry of Education, and the building industry, as it has become better informed about our work, has criticised constructively." He spoke of the close association of the Brixton School with the department of technology of the City and Guilds of London Institute, whose director, Major-General C. Lloyd, CB, CBE, TD, responded to the toast. Mr. Reid also added a plea that the building industry should not allow the BATC to disappear without letting something comparable take its place.

The toast "The School and the School of Building Association," was proposed by Mr. F. Bray, under-secretary for further education, Ministry of Education, and was responded to by Mr. H. J. Adams, chairman of governors. Mr. L. J. Holloway, senior vice-president, LMBA, and Sir Richard Coppock, CBE, general secretary of the NFBTO, responded to the toast "The Building Industry."

As a memento of the occasion each guest was provided with a bound and illustrated booklet published by the LCC, containing the history of the school from its foundation in 1904 to the present day.

Membership of the Brixton School of Building Association is open to all former members of the school, full or part-time, students or staff.

BOOK

HOSPITAL PLANNING REQUIREMENTS. By Guy Aldis, ARIBA, AADipl., Architect to the East Anglian Regional Hospital Board. (London: Sir Isaac Pitman and Sons, Ltd.) Price 85s.

THIS book by Mr. Guy Aldis is full of good things, beautifully illustrated by well-drawn diagrams showing a great deal of valuable information, and should be helpful to those architects and medical people who know little about what is wanted in a new hospital.

It is perhaps a little unfortunate that no attempt has been made to put the many pieces together to show how the whole hospital would be planned. It is as if these many pieces, like those of a jigsaw puzzle, had been produced, thrown into a hat as it were, and no key provided to show what the ultimate picture would be like. So much is left out that a true picture of all the requirements cannot be envisaged; for instance, no reference is made to the engineering services, boiler house and such like, all very important in any comprehensive layout. Nor is there any mention of Sisters' and Nurses' Homes.

It may be that these items were deliberately left out, and if so it means that the book fails to give a true picture of the overall planning problems involved. What one is trying to say is that it would be impossible merely to take all the little pieces illustrated and juggle with them and then hope that the result would be a modern hospital plan.

The first great problem in planning a new hospital is the site, and to start planning with preconceived ideas as to the size and shape of individual rooms, each with their windows placed in accordance with the particular layout of those rooms as suggested in the diagrams, would be quite impossible and, therefore, while the information given in this book is of value it must not be considered the final word as so much will depend on site, aspect, window spacing, and the general layout of the whole complicated group of buildings.

It is sad to realise that now, nearly ten years after the end of the war, practically no new hospitals have been built; much, undoubtedly, has been put on paper, but that is a risky thing to do unless those people who are going to administer and work in the hospital have been heart and soul in the development of the plans. No real or valuable lead has come from the Ministry of Health as to the shape and size of the many new hospitals needed so badly in this country if we are not to lag further behind America and the Continent, and things have been complicated by the development of experimental wards, involving as they do drastic changes from precedent. These changes may prove satisfactory, but it is essential to remember that it is almost impossible and certainly most unwise, to expect, or hope, to produce a stock pattern blue print set of hospital plans capable of fitting any and every size and shape of site, and at the same time to satisfy the particular needs of the district.

It is for these reasons that it would be well to approach the information given by Mr. Aldis with reservation; at the same time, he has most admirably set out much useful data, and is to be congratulated.

DEMONSTRATION HOUSES, CANTERBURY

City Architect, Canterbury
L. HUGH WILSON, OBE, ARIBA, AMTPI

IN December, 1953, the Minister of Housing and Local Government invited the Canterbury City Council to erect a number of houses to demonstrate possible methods of making further reductions in costs by using the cross-wall technique. With this method the brick party walls take all loads from floors and roofs and the front and back walls can be reduced to light prefabricated panels. There is also the possibility of using dry interior finishes and factory-made components. The Ministry produced memoranda in consultation with the Building Research Station giving general advice on the principles to be followed in using this method of construction and also suggesting possible materials and processes for the various parts of the structure.

The City Council welcomed the invitation of the Minister and it was eventually decided to build 25, 18 ft. frontage houses at London-road Estate and 11, 15 ft. frontage houses at York-road. The drawings and specifications were prepared in close consultation with the Ministry and the Building Research Station.

Sketch plans were submitted to the Ministry in February and draft working drawings towards the end of March. Bills of quantities were prepared and prices were negotiated with two contractors and these were forwarded to the Ministry for approval at the end of April.

The completed houses were opened on Monday (November 15) by Mr. William Deedes, Parliamentary Secretary, Ministry of Housing and Local Government.

All the houses are of the three-bedroom/four-bedroom type and are suitable for building in terraces. Access to the rear garden is through a store and kitchen and the dustbins are sited at the front of the houses. The accommodation is as follows:—

London-road.—(Ground-floor Types EH1 and EH2): Living-room, 200 ft. super; kitchen, 72 ft.; store (including fuel), 36 ft.; outside store, 15 ft. *(First floor)*: Bedroom 1, 133 ft. super; bedroom 2, 76 ft.; bedroom 3, 69 ft.; bathroom, linen cupboard. Total superficial area, 732 ft. super.

All the houses have the same general plan, but in Type EH1 the staircase rises from the living-room, giving an open-plan type house with the heat being allowed to circulate to the first floor.

York-road.—(Ground-floor Type EH3): Living-room dining kitchen, 295 ft. super; store (including fuel), 47 ft.

Type EH4: Living-room, 157 ft. super; dining kitchen, 136 ft.; store (including fuel), 47 ft.

First floor (Types EH3 and EH4): Bedroom 1, 142 ft. super; bedroom 2, 63 ft.; bedroom 3, 75 ft.; bathroom, linen cupboard. Total superficial area, 765 ft. super.

House Type EH3 has an open ground floor, the living-room dining space and kitchen being divided by the staircase and kitchen fitments. House Type EH4 has a separate living-room and dining kitchen; the staircase rising from the living-room. In both cases heat is allowed to circulate to the first floor.

All houses are in accordance with the Ministry's requirements. Electric light and power points are provided as usual, gas and electric points are provided for the installation of a cooker and there is also a washboiler. There are cupboards in two of the bedrooms. Ground- and first-floor ceiling heights are 7 ft. 6 in.

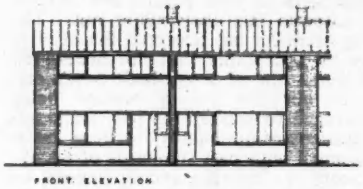
Final cost statements have now been prepared for 15 houses at London-road and five houses at York-road. These costs show an average saving of £64 per house over a comparable two-bedroom house in traditional construction.

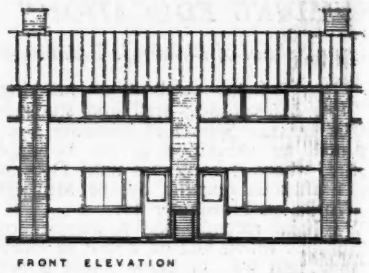
Work at London-road was commenced on May 10 and on November 15, 15 houses were completed and the remaining 10 were in an advanced stage of construction. The houses at York-road were commenced on May 24 and completed on November 13.

The deputy city architect at Canterbury is Mr. C. W. Gunner, ARIBA. The architect in charge of the scheme was Mr. R. C. Pannett, ARIBA, AADipl., and the quantity surveyors were Messrs. Widnell and Trollope. The contractors for the London-road contract were K. A. Hawkes, Ltd., and for the York-road contract G. Lewis and Sons (Dover), Ltd.

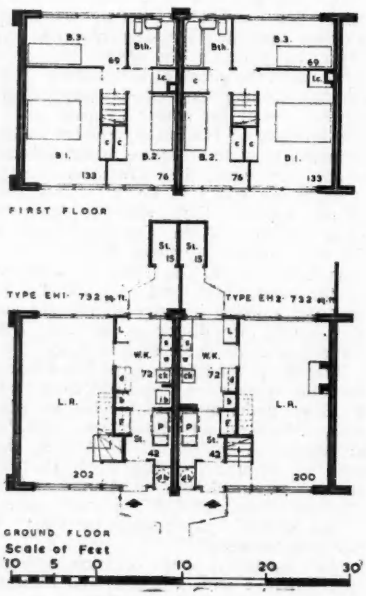
The following statement on final cost comparisons has been prepared by the quantity surveyors :—

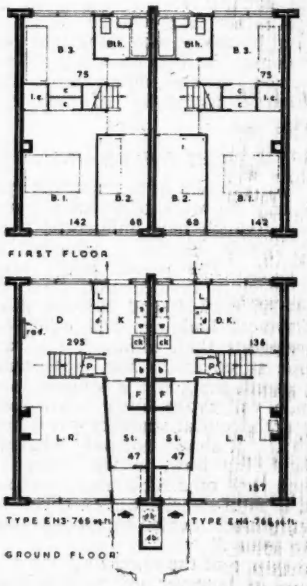
We have attempted to assess the value of the demonstration houses by comparing their cost with houses of the type previously built by the City Council and on the basis set out below we estimate that £1,284 was saved in building 20 houses, an average saving of £64 per house.





Elevations of the four types of demonstration houses.





The best comparison appears to be afforded by the Biggleswade Passage Contract for 14 two-bedroom houses of Type 2C2. The contract for these houses was let at about the same time as that for the demonstration houses and the contractors, Messrs. Hawkes, are also the contractors for one of the demonstration contracts.

Both types of house are of much the same floor area and each provide accommodation for four people. The demonstration houses have three bedrooms: an appropriate increase has, therefore, been made on the tender prices for the two-bedroom 2C2 Type houses for the extra partitioning required for the third bedroom. Adjustments have also been made for differences in superficial area and for the fact that the 2C2 contract was for semi-detached pairs, while the other was for terrace houses. External works and drainage have been excluded in both cases.

The 2C2 contract and the demonstration house contracts for Type EH1 included external outbuildings (although Type EH1 also has a small internal store). The cost of these outbuildings has been omitted in the cost comparison between Types 2C2 and EH1, so that the comparison will be with the houses alone. But as demonstration Type EH3 has a larger floor area with a bigger internal store and no external store, the comparison in this case has been made with the cost of Type 2C2 with the external store included.

The figures used in the following assessment are the tender figures for the Biggleswade Passage Contract (Type 2C2) and the final costs for the first groups of demonstration houses adjusted for the factors mentioned above.

Block of Six Houses

Cost of single house Type 2C2 brought up to date but reduced to similar floor area as house EH1. The cost includes an additional door and partitioning, etc., to form a third bedroom and will thus provide a direct comparison	£1,002
Cost of single house Type EH1	935
Saving of experimental house over traditional house	67

Block of Nine Houses

The resultant saving is	68

Block of Five Houses

Cost of single house Type 2C2 including outbuilding brought up to date but reduced to similar floor area as house Type EH3. The cost includes an additional door and partitioning, etc., to form a third bedroom and will thus provide a direct comparison ..	£1,041
Cost of house Type EH3	987
Saving of experimental house over traditional house	54

The average saving is therefore:—

9 x 68 = £612
6 x 67 = £402
5 x 54 = £270

20)1,284

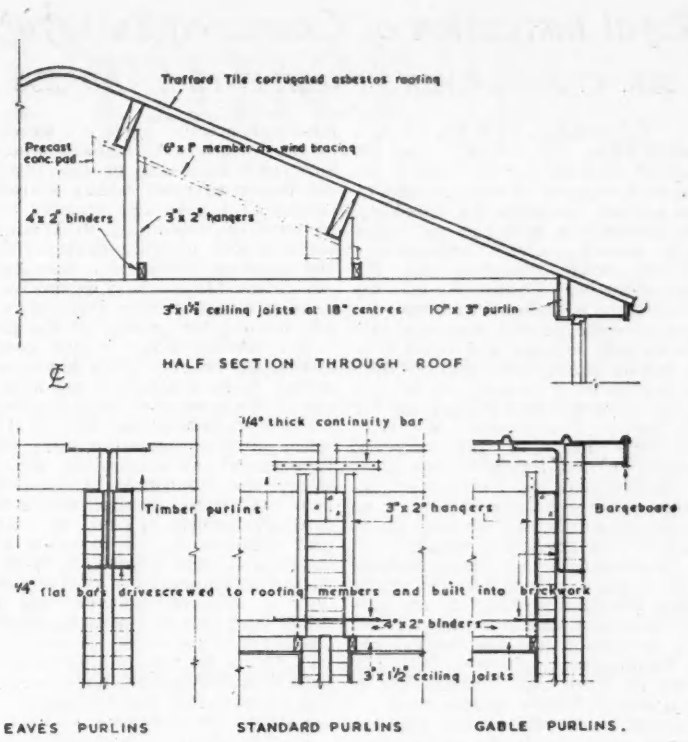
£64 per house

Following is an outline specification for the demonstration houses:—

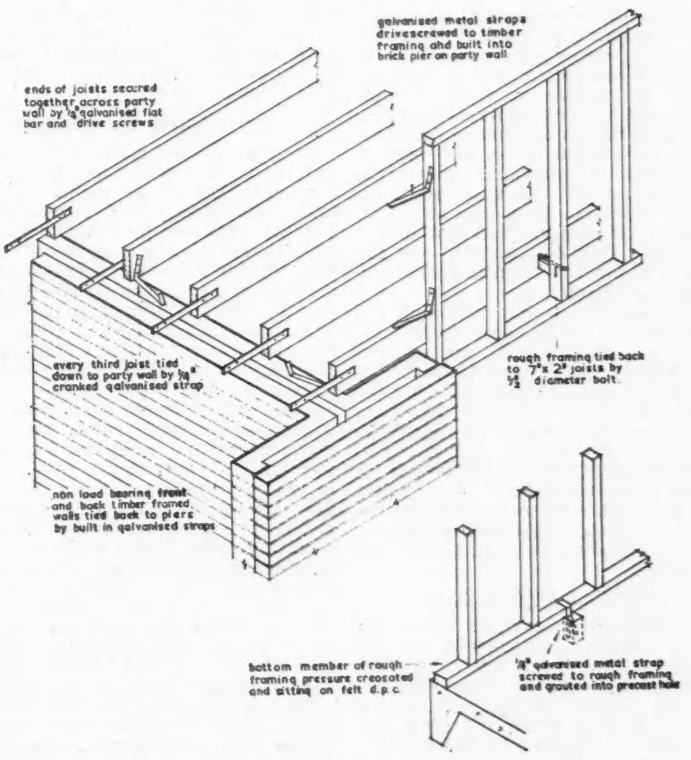
Foundations.—PC concrete foundations to cross walls. Concrete ground-floor slab thickened at front and back edges. *Cross walls.*—11-in. brick cavity walls plastered. *Panel walls.*—Timber-framed covered externally with felt, 1 in. woodwool slabs, wire netting and two coats rendering, and internally with plasterboard faced with foil on one side and with setting coat.

Internal partitions.—4½-in. brick or 3-in. breeze on ground floor, plasterboard partition slabs on first floor. *Roof.*—Solid-timber purlins spanning between and anchored to cross walls with hangers to support ceiling joists. Covered with wire netting, felt and coloured asbestos-cement Trafford tiles with purpose made curved ridge. 1-in. thick layer of exfoliated vermiculite between ceiling joists as insulation.

Floors.—Asphalt finish to ground floor. Timber joists to first floor spanning between and anchored to cross walls covered ¾ in. square edge boarding. *Ceilings.*—Plaster lath with skim coat. *Windows.*—Metal casements in wood framing to front and back panel walls.


Trafford Tile corrugated asbestos roofing
Precast conc. pad
6" x 2" member as wind bracing
4" x 2" binders
3" x 2" hangers
3" x 1½" ceiling joists at 18" centres
10" x 3" purlin
HALF SECTION THROUGH ROOF
¼" thick continuity bar
Timber purlins
3" x 2" hangers
Bargeboard
¼" flat bars drivescrewed to roofing members and built into brickwork
3" x 2" binders
3" x 1½" ceiling joists
EAVES PURLINS
STANDARD PURLINS
GABLE PURLINS.

Roof construction.


galvanized metal straps drivescrewed to timber framing and built into brick pier on party wall
ends of joists secured together across party wall by ⅛" galvanised flat bar and drive screws
every third joist tied down to party wall by ⅛" cranked galvanised strap
rough framing tied back to 7" x 2" joists by ½" diameter bolt.
non load bearing front and back timber framed walls tied back to piers by built in galvanised straps
bottom member of rough framing pressure creosoted and sitting on felt d.p.c.
⅛" galvanised metal strap screwed to rough framing and grouted into precast hole

Details of metal straps.

Royal Institution of Chartered Surveyors

MR. C. P. BOWYER'S PRESIDENTIAL ADDRESS

MR. CHARLES PERCIVAL BOWYER, TD, FRICS, in his presidential address to the RICS on November 8, touched on many matters of current interest, including the rebuilding of the Institution's premises and other domestic affairs, current legislation—particularly town planning—and the progress of the New Towns. We take the following extracts from his address:—

There are some, he said, who have said we should sell this site and build elsewhere, but we have decided that our duty to our successors is to erect on this site a building of which we and they can for ever be proud. The site itself is unique, in the very heart of the religious, administrative and legislative centre of Great Britain and the Commonwealth. No other professional society enjoys so privileged a position, and we must guard it jealously and develop it worthily. It is my personal wish that a new building will be started during the tenure of our secretary, the chief architect of our current fortune and status, for his services to this Institution are far beyond my ability to describe.

It can be done, and I would like to tell you why I think it should be done. In the first place, the membership has multiplied sevenfold during this century alone, and since our existing premises were built. Our Institution has also become more active; we contribute much more to public affairs now than our ancestors were able to do. We are in constant touch with Government departments and other organisations which ask for our assistance in matters where the experience of our members enables us to offer expert guidance or advice. We endeavour to provide more and better facilities and services for members themselves; and there is still much more that we can and should do in that respect. Development of techniques within the profession and the volume of legislation of which members must have an expert knowledge demand an increased output of literature from this building and the provision of facilities for members to discuss their problems.

In the expectation that rebuilding will be carried out in the near future, the Council has approved the appointment of a committee to initiate the necessary preparations, and the committee has begun its task. There is much preliminary work to be done and many people to consult, for our corner of Parliament-square has an importance far beyond the confines of our membership. I hope that, in 14 years' time, when we celebrate our centenary, we shall have been firmly and happily established for some time in our new home.

OVERSEAS MEMBERSHIP

Our membership overseas is also increasing apace, particularly in the Commonwealth, where, apart from our branches, we are happy in our affiliation with the South African Chapter of Quantity Surveyors and the New Zealand Institute of Surveyors. Our branches in Hong Kong, in Malaya, and in East and Central Africa are actively spreading our traditions in a manner which is most satisfactory. There is a steady flow of our members to Canada where the aims and standards of the Institution are becoming more widely known and accepted. I have also recently had the pleasure of welcoming to Westminster some of our growing circle of friends and members in Australia, New Zealand, Africa and Malaya, and we receive good news of others in India, Pakistan, Ceylon and many other corners of the globe.

But turning now to our corporate affairs, let me say that it is not enough merely to have all surveyors under one roof. We must constantly facilitate the welding together of the many crafts that make up this composite body of surveyors—this association of the many talents that contribute to the measurement, valuation, management and prudent development of land. It is essential that members of all branches of our vocation should regard themselves as part of a community of men and women with a common purpose and intent, rather than part of a separate sect within a network of specialists. A specialist who confines his interests to his own restricted field of activity cannot hope to enjoy the full benefits that his professional home can offer. His interests—like his training—must be broadly spread, and directed to the cultivation of a liberal understanding of the scientific, technical and legal background of his profession, and thereby to the development of a sound judgment in dealing with the many problems that confront him. A degree of specialisation within our profession is inevitable, but we must resist any tendency so to limit the scope of our individual activities that we are in danger of looking at the world with a limited vision.

PROFESSIONAL AFFAIRS

In addition to preserving a liberal training for the profession we must be constantly jealous of maintaining our traditional honesty and a rectitude of conduct in all our professional affairs. I have always taken a close interest in the work of our Professional Practice Committee, and I am therefore able to assure you that there is little cause for concern about the manner in which members of this Institution conduct their affairs. Discipline is essential in any civilised community, but I believe that our discipline should come from within, by training and example, rather than by the multiplication of rules and threats of sanctions. Orderly people who are least in need of regimentation are the first to kick against it, and I believe that, by setting the highest standard in our work, by giving sound advice, wise counsel and fair dealing to all, we shall raise and maintain our status by a voluntary discipline that needs no legislative control or sanction. I should personally deprecate any action being taken to regulate our conduct by any means that did not have the overwhelming support of our members.

Having referred to the "spate of legislation which we endure, and which has flowed at an alarming rate during this last Parliamentary session in particular," the president continued: We have made, I believe, some useful contributions in our memoranda to the Government departments concerned, and we can take some credit for improvement here and there, though falling far short, no doubt, of the amendments that many of you would wish. I have some knowledge of the work involved, and I assure you that our thanks are indeed due to the Parliamentary Committee for the hard work that they do in this field. The books on the three major Acts of this Session which we are publishing and issuing to members will, we hope, be of great practical value, and help us all to understand these complex measures.

As to the new Town and Country Planning Bill, the president said: As surveyors, we shall endeavour to work the Bill, when it becomes law, to the best of our understanding, but it is my earnest hope that soon it will be replaced by a comprehensive and wise planning measure based on positive development, and not the prevention of it, with fair compensation to those who suffer loss for the good of the community.

THE NEW TOWNS

Perhaps the best examples of positive planning at the present time are to be found in our new towns. I have been interested in the idea of new towns since I first read the report of the Reith Committee, to which our own John Watson made such a great contribution. Latterly, I have been privileged to take an active part in the development of one of these towns, and I rejoice in the thought that the Minister has placed great responsibility for this social experiment in the hands of our members. Chartered surveyors have been appointed to most of the development corporations, and of course our members play an important part as officers responsible for the development and management of these new communities.

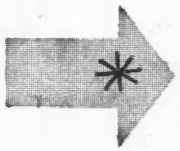
Of course there is room for criticism. The task is great, and progress has in some cases been disappointing, for a variety of reasons. But I think it is true to say that development is now proceeding more rapidly, with the better and freer supply of building materials. Unfortunately, welfare facilities lag far behind the provision of houses and factories, and the school building programme cannot keep pace with the growing populations of the towns. We urgently need community centres, churches, health centres, public houses and cinemas, but the development corporation is not the authority responsible for meeting many of these social needs. As my audience will know, corporations are not autonomous bodies, but are subject to considerable control and restriction. A major difficulty is finance, and as the corporations are spending public money, some control must, of course, be accepted. But it is not always possible to satisfy the Treasury that a project will show a reasonble cash return. Nothing appears to be allowed for what, in rating parlance, we might call the indirectly productive part of the undertaking. Though spiritual values may pay no cash dividend, no new towns can be a success without those necessary things which breathe life and spirit into a community.

The conception of new towns is a challenge to us all, and I believe they can and will provide a wider, better and healthier life for many of our people.

'Pink Primer' makes experts see red

Writing in "Municipal Engineering" two leading L.C.C. chemists have pointed out the danger of specifying merely 'pink primers' instead of insisting upon the genuine article. They say:—

"To quote in a specification 'pink primer' is courting disaster, because these are frequently based on cheap leadless pigments and their use on exterior joinery must be condemned in the interest of economy."



"GENUINE LEAD PINK PRIMER *is the proper description, because a genuine white lead containing some 10 per cent of red lead in the pigment cannot be bettered for soft woods of good grade."*

S. C. Burgess, Ph.D., B.Sc., F.R.I.C., F. Inst. Pet., Chemist-in-Chief and C. A. Chaplin, Ph.D., B.Sc., F.R.I.C., Principal Assistant Chemist to the L.C.C.

This needed saying! — and how heartily we agree. Associated Lead Manufacturers Ltd., market a complete range of Lead Primers: wood primers, stone primers, binder primers, Alkali resistant sealer primers and rust inhibiting primers. These Lead Priming Paints have the maximum proportions of Lead suitable for the particular purpose to which they are designed and are sold under the brand names, "Magnet", "Ibex", "Rustodian", Johnson's 'J' and Cookson's "Crescent", but to obtain fuller details about these paints and about Lead Priming generally write for the free booklet, "Lead Priming Paints" to —

ASSOCIATED LEAD MANUFACTURERS LIMITED

IBEX HOUSE, MINORIES, LONDON E.C.3
CRESCENT HOUSE, NEWCASTLE
LEAD WORKS LANE, CHESTER

ASSOCIATED LEAD PRODUCTS

EXPORT ENQUIRIES TO: THE ASSOCIATED LEAD MANUFACTURERS EXPORT CO. LTD., IBEX HOUSE, MINORIES, LONDON E.C.3

(... but is there a Lynx in the house?)

Your plans deserve a specification that includes the 'Lynx'. The 'Lynx' is a lavatory cistern. Noiseless. Efficient. Pleasing to the eye. Its silent Shires internal fitting flushes at a touch — first time, every time — and the cistern quickly refills ready for use again. The gleaming Duranite shell — designed by a leading industrial designer — has no dust-collecting nooks or crevices, will not rust or corrode, never needs painting, wipes clean with the flick of a cloth, and is beautifully hygienic. The 'Lynx' costs very little more than the old-fashioned type of lavatory cistern.

'Lynx' high and low level cisterns are available in White Keramic Ware and a range of colours, or in Black Duranite. They can be supplied with a reversible side lever operation. This important feature eliminates the need for handed duplicate stocks. The 'Lynx' has a powerful flush syphon conforming to B.S.S. 1125 and Water Works Specifications. Fixing brackets are completely concealed. Capacities:—2, 2½ and 3 gallons.

made by Shires for your convenience

S14

Shires are the largest manufacturers of moulded cisterns in the country. They also make W.C. pans and seats, flush-pipes and complete W.C. Suites. Leaflets from:—
Division D, Shires & Co. (London) Ltd., Greenbottom Works, Guiseley, Yorks.
(Factories also at London and Stoke). Shires (Ireland) Ltd., Stannaway Drive, Crumlin, Dublin.

IN PARLIAMENT

Atomic Energy Buildings

ON November 2, MR. GEORGE STRAUSS asked the Minister of Works whether he would give an assurance that the Atomic Energy Commission would give his department the same opportunities for constructing its new buildings as will be afforded to private contractors.

MR. BIRCH replied that no change was being made in the arrangements for the actual construction of buildings, which would continue to be undertaken by firms under contract. So far as design and supervision were concerned, he referred Mr. Strauss to the reply he had given him a week earlier, which explained the position.

LONDON BUILDERS' CONFERENCE

On November 9, MR. GEOFFREY DE FREITAS asked the President of the Board of Trade when he received the Report of the Monopolies Commission on the London Builders' Conference.

MR. HENRY STRAUSS: As I told the House on July 7, the President of the Board of Trade received this report on June 19.

MR. DE FREITAS asked when an order under the Monopolies Act would be laid to end the "racket," as the Government had had all this time to consider the report, or was the Minister defending these extensive restrictive practices by big business?

MR. STRAUSS said that any question about action on the report was for the Minister of Works.

DISTRIBUTION OF INDUSTRY

On November 9 MR. JAY asked the President of the Board of Trade, by what method, in the absence of building licensing, he proposed to carry out the policy of securing a balanced distribution of industry throughout the country.

MR. HENRY STRAUSS: By appropriate use of the powers conferred by the Distribution of Industry Acts, 1945 and 1950, and Section 14(4) of the Town and Country Planning Act, 1947, and by advice to industrialists wishing to establish new factories.

MR. JAY asked if the Minister was satisfied that the provision of the Town and Country Planning Act was applicable, not merely to the balanced distribution of industry within the locality, but to the balance of distribution throughout the country between congested and under-employed areas.

MR. STRAUSS said that Mr. Jay was aware of the complexities of this matter. The control of this matter by licensing was replaced by the methods under the Town and Country Planning Act by a decision taken in the lifetime of the Labour Government, and was, he thought, inevitable unless building licensing was to be permanent.

MR. JAY said that the abandonment of building licences, raised this question in an acute form, and it was important to know what the powers were.

MR. STRAUSS said that the powers were those that he had stated. Even before the formal abolition of building licences the method of inducing industry to go to specific places was that started by the Labour Government.

PREFABRICATED HOUSES

On November 9, MR. STEWARD asked the Minister of Housing and Local Government how many prefabricated houses were built in England and Wales under the post-war programme; how many had since been demolished; and within what period he estimated the remainder would be replaced by permanent brick dwellings.

MR. SANDYS: About 125,000 prefabricated temporary houses were built in England and Wales under the Housing (Temporary Accommodation) Act of 1944. I cannot say how long they will be retained. Up till now about 700 have been demolished or destroyed.

SERVICE HOUSING, PORTSMOUTH

On November 10, BRIGADIER TERENCE CLARKE asked the First Lord of the Admiralty how many houses and flats were being built in the Portsmouth area for officers and ratings, respectively, in the year ending April, 1955.

MR. SIMON WINGFIELD DIGBY, Civil Lord to the Admiralty, said that contracts had already been let during this financial year for 65 officers' and 204 ratings' houses in the Portsmouth area. Plans and contract particulars were at present being prepared for a further 192 officers' and 922 ratings' houses and flats, and it was hoped that contracts for these would be placed by, or soon after, April, 1955.

TOWN PLANNING INSTITUTE

New President Installed

MR. ERNEST H. DOUBLEDAY, OBE, FRICS (County Planning Officer for Hertfordshire), the new president of the Town Planning Institute, was invested with the insignia of office by Sir William Holford, immediate past-president, at the 41st session of the Institute held at the Livingstone Hall, Westminster, SW1, on November 11, when the large gathering present included Mr. C. H. Aslin, CBE (President of the Royal Institute of British Architects).

Before formally delivering his presidential address, MR. DOUBLEDAY expressed his warm thanks and gratitude to Sir William Holford for the excellent way he had presided over the Institute's affairs during the past 12 months. Few members of the Institute, he felt, realised the amount of work Sir William had done on their behalf. He had acted as the Institute's ambassador overseas and would continue to act in that capacity in the negotiations that were taking place in South Africa at the present time.

(Mr. Doubleday then read his address, which was reported in our last issue.)

Moving a vote of thanks to Mr. Doubleday for his address, MR. DESMOND HEAP (senior vice-president) commented on the president's reference to the regeneration of town centres. There were many areas of bad lay-out and development, and he felt if more attention could be paid to that subject the less need there would be for going out to the virgin areas. It might be the answer to some of their problems if some sort of regeneration could be introduced. With the increasing difficulties of travelling to London, people were thinking of the advantages of some sort of central regeneration that would bring them somewhere that was not quite so far from their work.

On the question of private building, Mr. Heap said that while he wished in no way to disparage the builders, he thought there was a case for better design in houses and the need for them to be designed by qualified architects. There were difficulties in all spheres, but he wished there was more control, more imaginative control, in building structures by private builders, particularly in the case of smaller houses on little estates. He would like to see something more restful to the eye.

Looking back over the past 40 years, planning, including planning law, seemed to him to be a thing of shreds and patches and a thing of fits and starts. Its progression was an erratic movement in which it took three steps forward and fell back two steps as though it over-reached itself. This caused a feeling of frustration and disappointment, but, nevertheless when looked at coldly and dispassionately, it disclosed a net gain of one step forward—a movement in the right direction. If it was slow and unspectacular it was none the worse for that. There was, he thought, something to be said for the inevitability of gradualness.

Mr. Heap said he had no doubt that planning would continue its erratic progress by zig-zag paths and would negotiate juts of pointed rock from time to time. Even so, they should not lose heart, and if they held steadfast to their purpose, they would, he had no doubt, in the fulness of time come upon the shining levels of the lake.

MR. M. J. HELLIER (junior vice-president), seconding, felt there was no doubt the Institute would have to look more and more to the needs of overseas members, so that it became an effective body not only in London, but also in the Commonwealth. Town planning could play a particular and important part in encouraging and sharing ideas in different parts of the world and in helping forward the furtherance of international relations on which happiness and peace was based.

REPLACEMENT OF OLD HOUSES

"The Crucial Problem of the Future"

MR. HERBERT ASHWORTH, general manager of the Co-operative Permanent Building Society, in a paper on "Economics and Finance of Twentieth Century Housing," at the annual conference of the National Housing and Town Planning Council held at Scarborough recently, said the crucial problem of the future was the replacement of the old houses. If in the next ten years we could go on building at an average rate of 350,000 houses, we ought to be able to get rid of at least 2m. old houses, allowing 1,500,000 additional houses to meet remaining shortages, abatement of overcrowding, a decrease in the number of shared houses, and population movements.

"Are we prepared to pull down 2m. houses, not all necessarily classifiable as slums, but all definitely sub-standard and aged?" he asked. "The problem of replacement may not be so intractable as is sometimes made out, provided that we are prepared to face the outcry in respect of the pulling down of houses which may soon be found to have virtues and qualities that have long remained unsung! The number of slums included in pre-war programmes and still standing is about 140,000. The number which could similarly rank to-day must be, according to the Ministry, hundreds of thousands, but it is questionable whether, on the old interpretation of the word 'slum,' we should be able to include as many as 2m. houses.

"I believe that we are moving on to the point where at least 50 per cent. of our dwellings will be owner-occupied and the bulk of the remainder will be owned by the local authorities," he added.

THINNERS FOR PAINT

Summons for False Description Dismissed

A SUMMONS brought against Paul A. Daniels, Ltd., of 27, Haggerston-road, Shoreditch, alleging they had contravened the Merchandise Marks Act, 1887, as amended by the Act of 1953, was dismissed at Old-street Magistrates' Court on November 15. (An earlier hearing of the case was reported in our last issue.)

It had been alleged that they had had in their possession for sale certain goods, namely kerosene, to which a false trade description, "Turpentine Substitute," was applied.

The Board of Trade, who brought the prosecution, were ordered to pay the company 25 guineas costs.

Announcing his decision, the magistrate (MR. HAROLD STURGE) said in his view the submission of the defence that the prosecution had failed to establish a *prima facie* case succeeded.

At the previous hearing, MR. D. A. GRANT (prosecuting) said the case concerned bottles of liquid labelled "Turpentine Substitute." The liquid was a type of kerosene and had nowhere near the same performance or behaviour of turpentine. To describe it as "Turpentine Substitute" was misleading, he claimed. He asked the Court to say that it was too inferior to call "Turpentine Substitute." The Board of Trade had brought the prosecution to protect the public and reputable trade manufacturers who did not like "this sort of thing" being mixed with their paint.

When the hearing was resumed on Monday, MR. REGINALD BATT (defending counsel) said there could be no doubt that the liquid in question was a substitute. It did thin paint and clean brushes. The question was: had the prosecution proved that that substitute was below the recognised standard?

In opening the case, Mr. Grant had said that the Court would have to decide what the man-in-the-street thought about it. If that were so, then the trade would also have something to say. There had been no evidence from the trade at all, counsel said.

Mr. Batt said that if an article contained the properties of turpentine—as well as a certain amount of turpentine, up to 5 per cent.—and did clean and thin paint and do the very things described on the label, and was in itself called a substitute, could that in any way be said to be misleading in a material particular? Could it be said to be false in a material particular?

A witness for the prosecution had said because the "turps substitute" in some instances caused bloom on paint and took longer to dry it was, therefore, unsatisfactory. But "unsatisfactory" was not a false trade description, he argued. If one wanted the genuine article one bought turpentine. Otherwise one bought white spirit or distillate. "This is genuinely and properly called a substitute," Mr. Batt added.

The magistrate: I am wondering whether it can be said that the word "substitute" can ever be false in respect of quality.

Mr. Batt: "Substitute" must mean "in place of" not "as good as."

The magistrate: I think that is the whole point.

Mr. Batt: I say that to be a false trade description it must bear no relation whatever to turpentine and not do any of the jobs that turpentine does. The evidence does not support that at all.

Mr. Grant submitted that a person was capable of being misled if he got wrong results—results he would not have got had he used turpentine. There was no standard laid down; that was why he had come to the Court to fix its own standard.

The magistrate said he should have thought the way to fix the standard was to call persons in the trade, to say "This is unsuitable for the job."

Mr. Grant said he had called as a witness a person who was intimately connected with the trade, and who was assisting in setting standards by experimenting in manufacturers' paints.

Replying to the magistrate, Mr. Grant said the word "substitute" had never been judicially determined.

BRITISH ARCHITECTURAL GUILD

ABT's Reply to Statement

THE Association of Building Technicians have issued a reply to the recent statement of the British Architectural Guild (reproduced in *The Builder* of November 12) on the problems of salaried architects.

The text of the ABT's statement is as follows:

The British Architectural Guild have issued a statement to the effect that whilst the ABT have been in discussion with the RIBA about representation of salaried architects, the Association came to an agreement with the ASW and AUBTW to admit members of those two organisations as members of the ABT. The statement concludes that ". . . the resultant governing body (of the ABT) must be so diluted by the trades, that the profession of architecture will have very small representation . . ."

It is surprising that the BAG have waited nearly four months to comment on a matter which was the subject of a Press report on July 30 and in making their belated comment ignore a clarifying statement by the Association which was published on August 13. That statement explained that the rules of the ABT had never allowed craftsmen (or "tradesmen," as the BAG prefer to call them) to become members of the ABT, and the new arrangements with the ASW and AUBTW had not changed that position in any way. The arrangements between the ABT and the ASW and AUBTW were designed to meet the needs of clerks of works who were formerly craftsmen.

If the BAG were aware of the published explanation when they made their recent statement it can only be concluded that they were deliberately misleading the profession. If they were not aware of the explanation it can only be concluded that they have not exercised the care in checking their facts, which is the first duty of any organisation seeking to establish a reputation as an authoritative and responsible body.

It may be of interest that the agreement to which they refer was first made in 1943 and was amended in March of this year—two months before the discussions with the RIBA were decided upon. It is also a fact that at the moment architects and architectural assistants are the largest single category in the ABT, and if more architects join us their increased numbers are bound to be reflected in the various committees and councils of the Association.

The BAG suggests that the whole question of representation should be taken out of the hands of the major professional body (the RIBA) and put into the hands of an independent committee, perhaps sponsored by the architectural journals. The 21,000 members and students of the Royal Institute may not always agree with their leadership and may at times feel impatient of them. Nevertheless, they will treat the timing and contents of this latest suggestion with the same caution as they treated the advent of the BAG.

CHEAPER PLUMBING

Single-stack Drainage Demonstration

OPENING AN EXHIBITION of single-stack drainage at the Royal Sanitary Institute in London on November 10, Mr. William Deedes, Parliamentary Secretary to the Ministry of Housing and Local Government, said that it marked an important achievement in the field of domestic plumbing. Britain had been the pioneer in single-stack drainage and since 1930 the model bye-laws had in fact been flexible enough to allow this system. London County Council had given it a practical trial in six-storey blocks of flats in recent years and had found it entirely satisfactory.

"What attracts me and will, we believe, attract a good many in this new plumbing prospect is the marked saving in cost achieved when you are building a block of flats or converting a multi-storey building," said Mr. Deedes. "The cost per flat in a five-storey block is £20. That compares with £34 for the one-pipe system or £41 for the two-pipe system in the same block. If we assumed that 25,000 flats are to be built in the coming year, that would represent a saving of £350,000 over one-pipe and more than £500,000 over the two-pipe system."

The demonstration will be open until December 1.

APPRENTICES' TOOL ALLOWANCE

Amendment Decision

At its meeting on November 3, the National Joint Council for the Building Industry unanimously made a decision to increase the amount of tool allowance prescribed in respect of carpenter and joiner apprentices. The council has approved and adopted the following revised wording of National Working Rule 3E (d) which its decision entails:—

"(d) *Apprentices.*—(1) Mason (banker-mason or mason-fixer) and plumber apprentices who are put to the expense of maintaining tools—2d. per day. (2) Carpenter and joiner apprentices who are put to the expense of maintaining tools—4d. per day."

This amended Rule operates with effect on and from November 15, 1954.

BOOKS RECEIVED

THE VILLIERS INDUSTRIAL ENGINE. By B. E. Browning. (London: George Newnes, Ltd.) Price 6s.

THE SMALLEST ROOM. By John Pudney. (London: Michael Joseph.) Price 10s. 6d.

THIS HOUSING QUESTION. By Alec Johnson. (London: Lawrence and Wishart, Ltd.) Price, cloth 8s. 6d., paper 5s.

CONFERENCE ON TROPICAL ARCHITECTURE. (London: George Allen and Unwin.) Price 32s.

SITE SUPERVISION. By A. A. Marfarlane, ARIBA, AMTPI. (London: The Architectural Press). Price 16s.

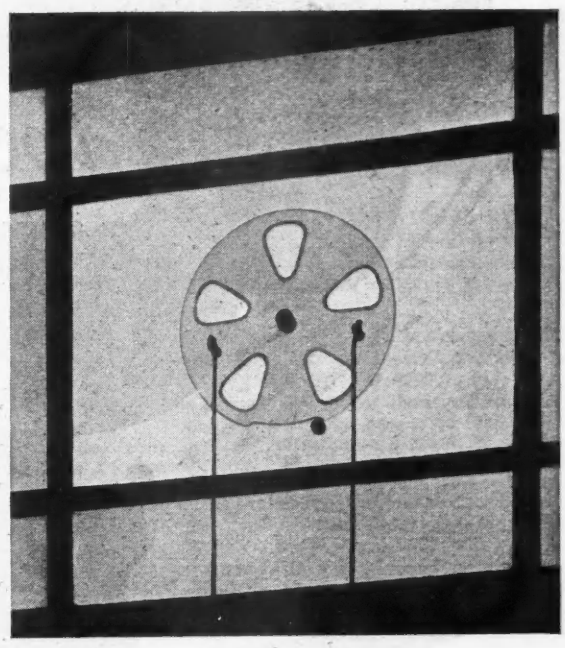
WALTER GROPIUS' WORK AND TEAMWORK. By S. Giedion. (London: The Architectural Press). Price 42s.

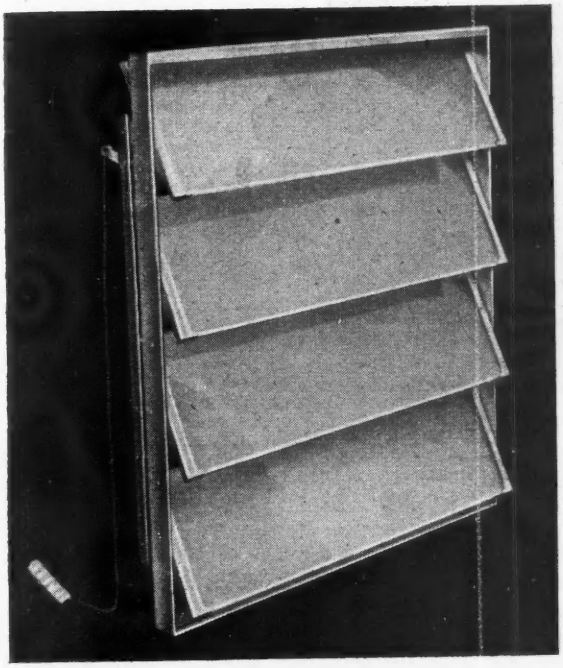
Ventilation to be considered?

These are but two of the wide range of ventilators made by Pugh Bros.

Circular Hit-and-Miss Glass Ventilator

An efficient and inexpensive form of ventilation for offices or homes. Hand or cord operated; the amount of ventilation being governed by the extent to which the openings coincide.





Louvre Glass Ventilator

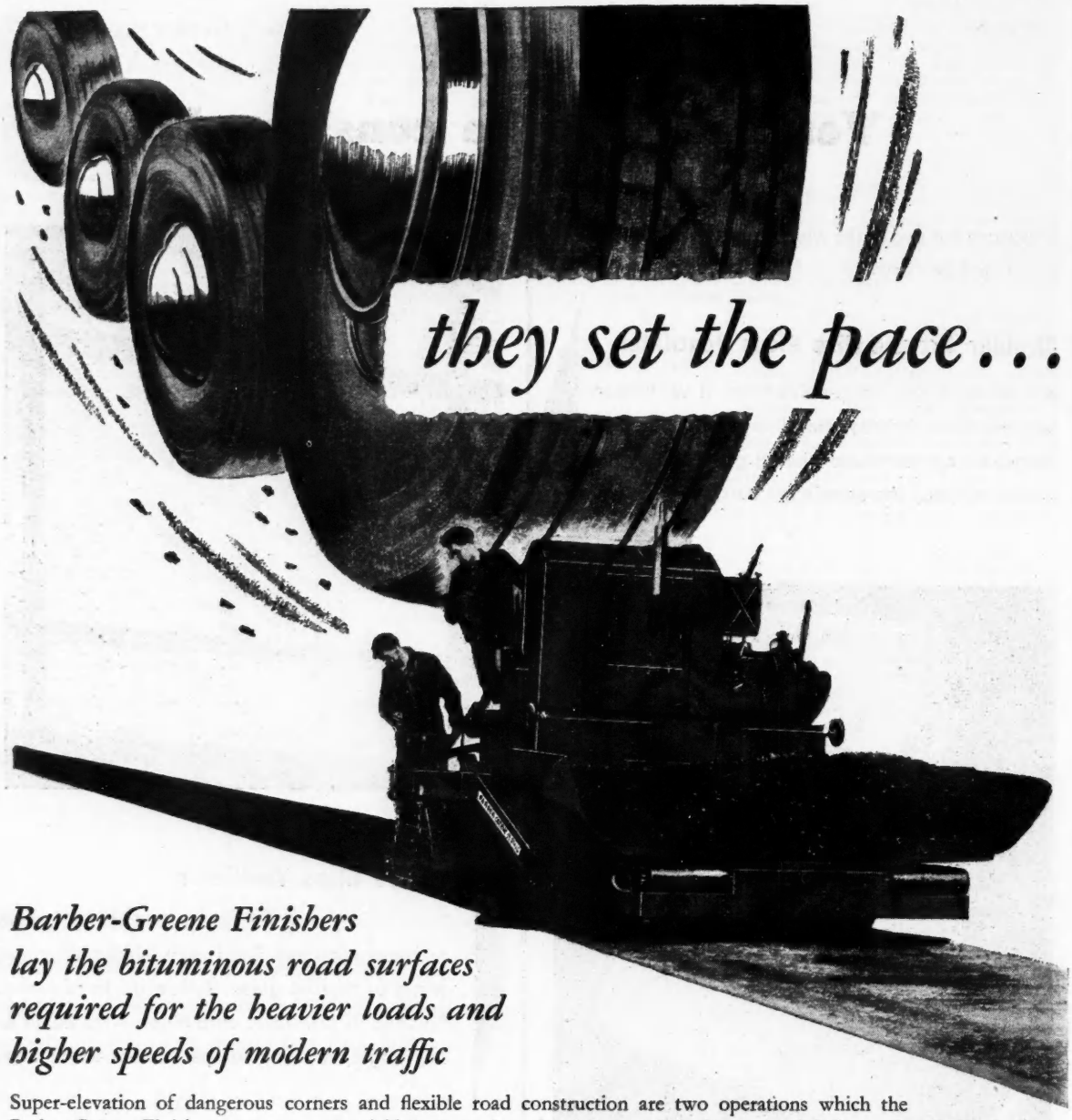
Built in any size for fitting to existing frames or openings, and fitted with blades of plate, wired or figured glass. Frame made of brass, finished in bronze or chromium. Adjustable to any angle, or fixed for permanent ventilation.

Full Details and Prices Available from the Makers

Consult

PUGH BROS. LTD 20/23 GREVILLE ST., LONDON, E.C.1

Telephone: CHAncery 5311



they set the pace...

Barber-Greene Finishers lay the bituminous road surfaces required for the heavier loads and higher speeds of modern traffic

Super-elevation of dangerous corners and flexible road construction are two operations which the Barber-Greene Finishers can carry out quickly, accurately and at low cost. Whether on straightforward surfacing or more complicated operations, the flexible controls of the Finishers will ensure a smooth, level running surface. The Finishers can lay any thickness between ¼ in. and 6 in. with accurate control of the cross section. They cause the minimum dislocation of traffic and permit the road surfaces to be used immediately after light rolling.

879A FINISHER: Standard laying width 10 feet, variable between 8 ft. and 12 ft. in 3 inch increments.
Hopper capacity 5 tons.
Operating speed: 7.85 to 44.5 ft. per min.

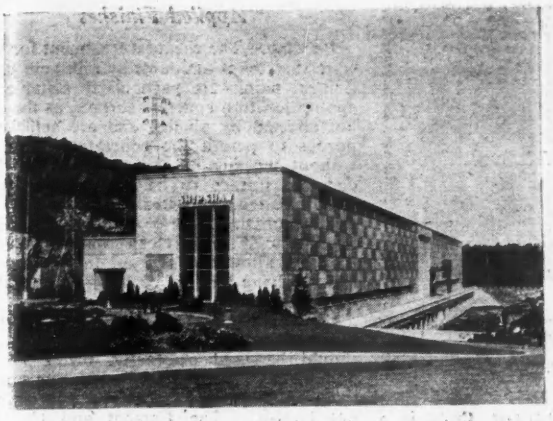
875 FINISHER: Standard laying width 7 ft., variable between 5 ft. and 8 ft. 6 in. in 3 inch increments.
Hopper capacity 3½ tons.
Operating speed: 7.85 to 44.5 ft. per min.

Barber-Greene *875 & 879A Finishers*

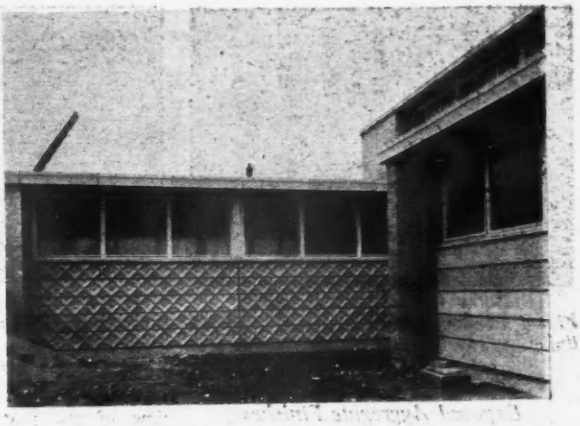
JACK OLDING AND COMPANY LIMITED
HATFIELD · HERTFORDSHIRE · ENGLAND

SCOTLAND: JACK OLDING AND CO. (SCOTLAND) LTD., COUPAR ANGUS, PERTHSHIRE
EIRE: JACK OLDING AND CO. (IRELAND) LTD., JAMESTOWN ROAD, INCHICORE, DUBLIN

® 77.189



The checkerboard effect on the Aluminum Company of Canada's Shipshaw Power Plant at Arvida, Quebec, was obtained by alternating the direction of the boards in the form panels.



Concrete cladding units used on a school in Ipswich. The fact that concrete is a plastic material in its early stages gives scope for the production of interesting surface patterns, as these examples show.

Surface Finishes of Concrete

By J. GILCHRIST WILSON, ARIBA

As concrete in its initial stages is a plastic material, and will reproduce the pattern and texture of the surface against which it is cast, considerable scope is offered in the production of effects by designing the formwork with this end in view.

Board-marked Finishes

The technique of using board-marked finishes to provide scale and interest to concrete surfaces is fully appreciated in Switzerland and California, which unlike Britain enjoy a clean, bright atmosphere, so that full shadow value can be obtained from even the slightest change in surface.

Generally, the boarding should be sound, straight and free from large loose knots or other defects, and new and old timber should not be mixed in the same elevation, as the colour of concrete cast against new timber is quite different from that cast against used timber.

Vertical joints should be evenly distributed over the surface, and no vertical joint should be less than 2 ft. from a corner.

Horizontal joints should line up with other features in the design, and construction joints should coincide with joints in the form boarding.

Smooth Board-Marked Surfaces. These are produced by dressed T and G boards. The boards should be uniform in thickness so that there will be no offsets at the joints.

Rough Board-Marked Surfaces. These are produced by the use of sawn boards, the texture depending upon the nature of the cut. Square edges permit a certain amount of leakage, which will emphasise the joints on the concrete, and if the boards are wide there may be warping, which will accentuate the joints still further.

Raised Joints. By chamfering the edges of the boards the joints can be made to project, the size of the projection depending on the depth of the chamfer; with 1 in. boards it should not be more than ¼ in. The faces of the chamfer should not be inclined at more than 45 deg. to the board face, and a better appearance is obtained if the inclination is rather less.

Recessed Joints. Grooves or recessed joints may be produced by fixing timber fillets to the face of the formwork covering the joint between the boards. The fillets may be rectangular, "V" or circular in section. If rectangular, the bottom face must be slightly bevelled, to facilitate withdrawal from the concrete and to produce an outward slope in the concrete which will shed rainwater.

The fillets may be lightly fixed by nailing, so that in the event of difficulty in removing the forms the fillets can be left in position for removal separately; or they may be fixed by screws from the outside face of the formwork, in which case the screws should be removed, and the fillets left in place to shrink, and the concrete to harden, before any attempt is made to remove them. This is a slightly more expensive method of fixing, but in some cases can be justified.

Overlapping Joints. By using weather boarding fixed in the reverse direction to its normal use as a cladding, a strong, regular marked surface can be produced. The use of weather boarding in this manner calls for a backing of close boarding.

Finishes Obtained by the Use of Special Formwork Linings

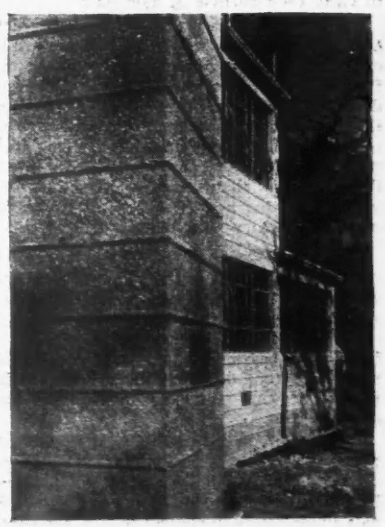
The two most common formwork linings are plywood and compressed hard fibre boards. They are used to produce smooth surfaces in which the joint lines are generally made as fine as possible.

The fixing of these linings should be to a close boarded backing by small flat-headed nails, evenly spaced near the edges and at regular distances over the area of the sheet, so as to hold the sheet flat and prevent buckling. The joints between the sheets may be filled with putty, plaster or white lead, and lightly sand-papered. If desired, joints can be raised or recessed, or patterns formed on the surface, by planting on timber fillets of any suitable section, as already described.

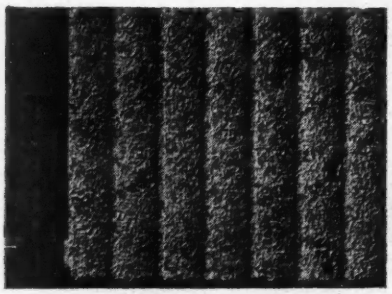
Other linings are flat and corrugated metal and asbestos sheets. Absorbent linings which remove a limited amount of water from the surface of the concrete and prevent the formation of voids due to entrapped air have also been used. Their advantages are unfortunately offset by the fact that they can normally be used only once.

Hessian and rubber sheets are two other materials that have been tried for the purpose of imparting a texture to concrete surfaces. The difficulty with materials of this type is the fixing, and their use would appear to be confined to panel work, where the joints between sheets can be masked by timber fillets.

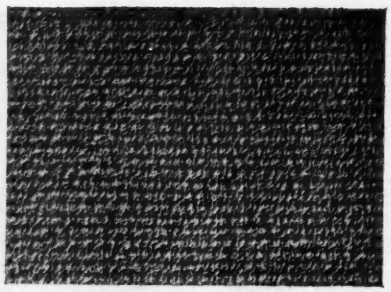
Another formwork lining having as its object the production of an exposed aggregate finish on *in situ* concrete is that known in America as the Aggregate Transfer Method. In this method the special facing aggregate is transferred from the form face to the structural concrete. This is accomplished by lining the formwork with thin plywood or other suitable material, to which the special facing aggregate is attached by means of an adhesive.



Marlborough College Science Building. An example of the use of board-marked finishes and exposed aggregate concrete. The aggregate was exposed by wire brushing on removal of the formwork.



Fluted asbestos used as a special formwork lining. The aggregate was afterwards exposed by wire brushing.



Various textured rubber sheets have been tried as a means of obtaining interesting concrete surfaces.

Exposed Aggregate Finishes

Attractive effects can be obtained by the removal of the outer skin of cement and fine material, which normally forms on all concrete, and exposing the aggregate.

Aggregates which fulfil the requirements necessary for good concrete are many and varied, and amongst them can be found a range of attractive colours which will look particularly pleasing when exposed.

The exposing of the aggregate reveals unsuspected imperfections in the concrete, honeycombing and segregation becoming particularly noticeable, and construction joints more evident. For this reason, then, the greatest care is necessary with the mix and the placing of the concrete, when the aggregate is to be exposed, regardless of the technique used for the purpose.

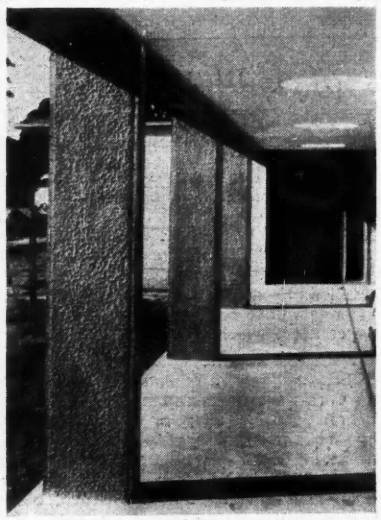
Brushing.—The cheapest and simplest method of removing the cement skin is by brushing whilst the concrete is still sufficiently soft. Using ordinary Portland cement, the mix period up to which the aggregate can be exposed in this way is about 24 hours after placing, depending on the temperature. The brushes used for the purpose should be either stiff bristle or wire, and plenty of water should be used during the treatment to clean each particle of aggregate.

The period up to which the aggregate can be exposed by brushing can be considerably extended by using a retarding liquid on the face of the formwork. Unfortunately, there does not appear to be any way of ensuring that the results obtained by using these retarders will be consistent, and if the formwork has to be kept in position for more than 24 hours then some mechanical means of exposing the aggregate appears to be the most satisfactory solution.

Tooling.—Working the hardened surface of the concrete with tools is effective and widely applicable. Not only is the surface skin removed, but the aggregate is fractured, often with increased good effect. The surface may be hammered, comb chiselled, tooled or point treated, depending upon the nature of the structure and the texture desired.

The commonest form of tooling is bush hammering, using either hand- or power-operated tools. The effect of the hammer is to crush the cement film, and the aggregate immediately in contact with it, the depth to which the aggregate is crushed depending upon the power or the pressure exerted by the operative.

The concrete should not be tooled until it is sufficiently hard (from four to eight weeks, depending upon the cement used and the time of the year); otherwise there is a tendency for the pieces of aggregate to be torn out, leaving unsightly pitting. Particular care should be taken at arrises to prevent spalling, and it is an advantage to leave them with a plain margin or to tool them by hand.



An example of point-tooled concrete.

The cover to reinforcement must be considered in relation to the treatment employed, and an allowance made for the amount it is proposed to tool away.

Grinding.—It is not a practicable proposition to grind large areas of *in situ* concrete; in fact this treatment is almost entirely confined to precast work of the terrazzo type.

The most important consideration, so far as grinding is concerned, is to choose an aggregate that is amenable to the grinding process. Ordinary gravel is most unsuitable: the choice is confined to marbles, spars and some granites. Hoptonwood stone will take a very good polish.

There are two methods of grinding: wet and dry. With dry grinding, the operatives need to wear masks to protect their lungs and eyes from dust; wet grinding is to be preferred, as the ground-off material works into a paste and assists the grinding action.

Grinding is sometimes used to remove unwanted fins due to escape of mortar between formwork boarding.

Applied Finishes

Painting.—The cheapest treatment for concrete surfaces is undoubtedly a cement paint. Cement paints are particularly suitable for application to a concrete surface, as they are not affected by alkalis, and are sufficiently porous to permit the concrete to dry out without pushing off the paint film. The concrete surface to be painted should be quite free from oil, grease, soot, etc. If for any reason the concrete is porous it should be saturated with clean water, and the moisture allowed to dry off the surface before applying the first coat, which should be well rubbed into the surface.

Cement paints are supplied in a wide range of colours, but only the very lightest should be used externally, owing to the possibility of efflorescence appearing on the surface. How to prevent its occurrence is not known. The Cement and Concrete Association is carrying out research on the subject, but meanwhile it is better to play for safety, and to use a colour which will make it less noticeable should it occur.

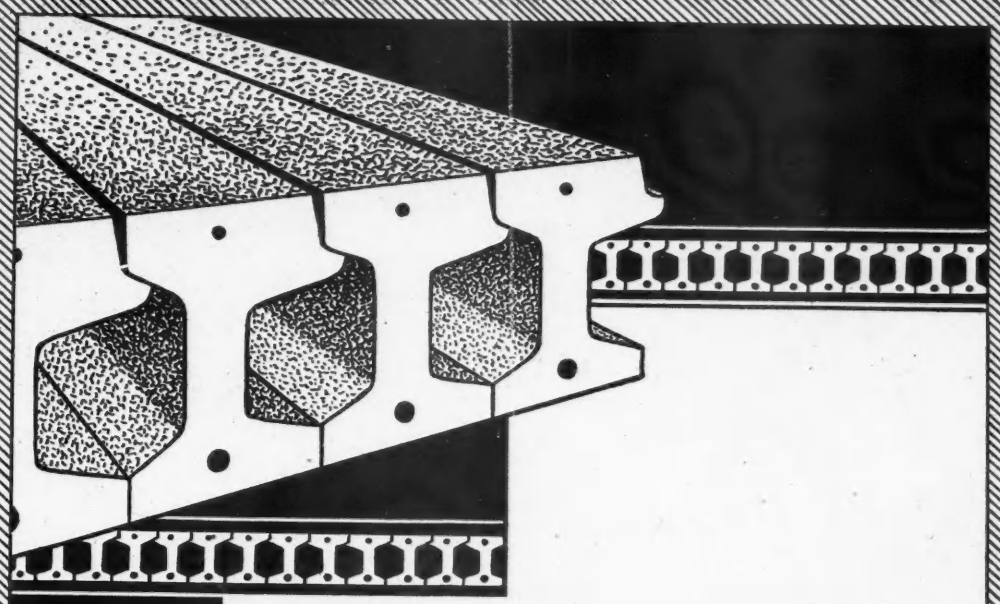
The Building Research Station in Digest No. 17, deals with colourwashes (including paints) on external walls. This has a table giving the properties of various types of colourwash, and is of considerable general use, and I would recommend everyone to have a copy in his files.

Where a gloss finish is required it is of the utmost importance to use a paint which will not be affected by the alkalis in the concrete. Most paint firms can supply a neutralising or alkali resisting primer; nevertheless, it is advisable to use a paint having a special base, such as for instance chlorinated rubber, as this is unaffected by concrete. Another very important point is to apply the paint when the concrete has had time to dry out thoroughly. Before application the surface of the concrete should be thoroughly wire brushed and all loose dust removed.

If any patching is necessary, this must be done well in advance of painting, to ensure that the new material has properly matured.

Rendering.—The main problem in connection with rendering on *in situ* concrete is con-

External renderings finished with a scraped texture weather more evenly than floated finishes and are particularly free from crazing.



RAPID PRE-CAST CONCRETE FLOORS

Available throughout Great Britain

For information, particulars, a technical handbook, or to arrange a personal meeting, please write or telephone our nearest Licensee:–

RAPID FLOORS (WESSEX) LIMITED (*West of England*)
17, GEORGE STREET, BATH — 'PHONE: BATH 3534

JOHN ELLIS & SONS LIMITED (*North Midlands*)
21, NEW WALK, LEICESTER — 'PHONE: LEICESTER 56682

KINGSTON CONCRETE PRODUCTS LIMITED (*North of England*)
RYDE AVENUE, HULL — 'PHONE: CENTRAL 8414 (Pte. Bch. Exch.)

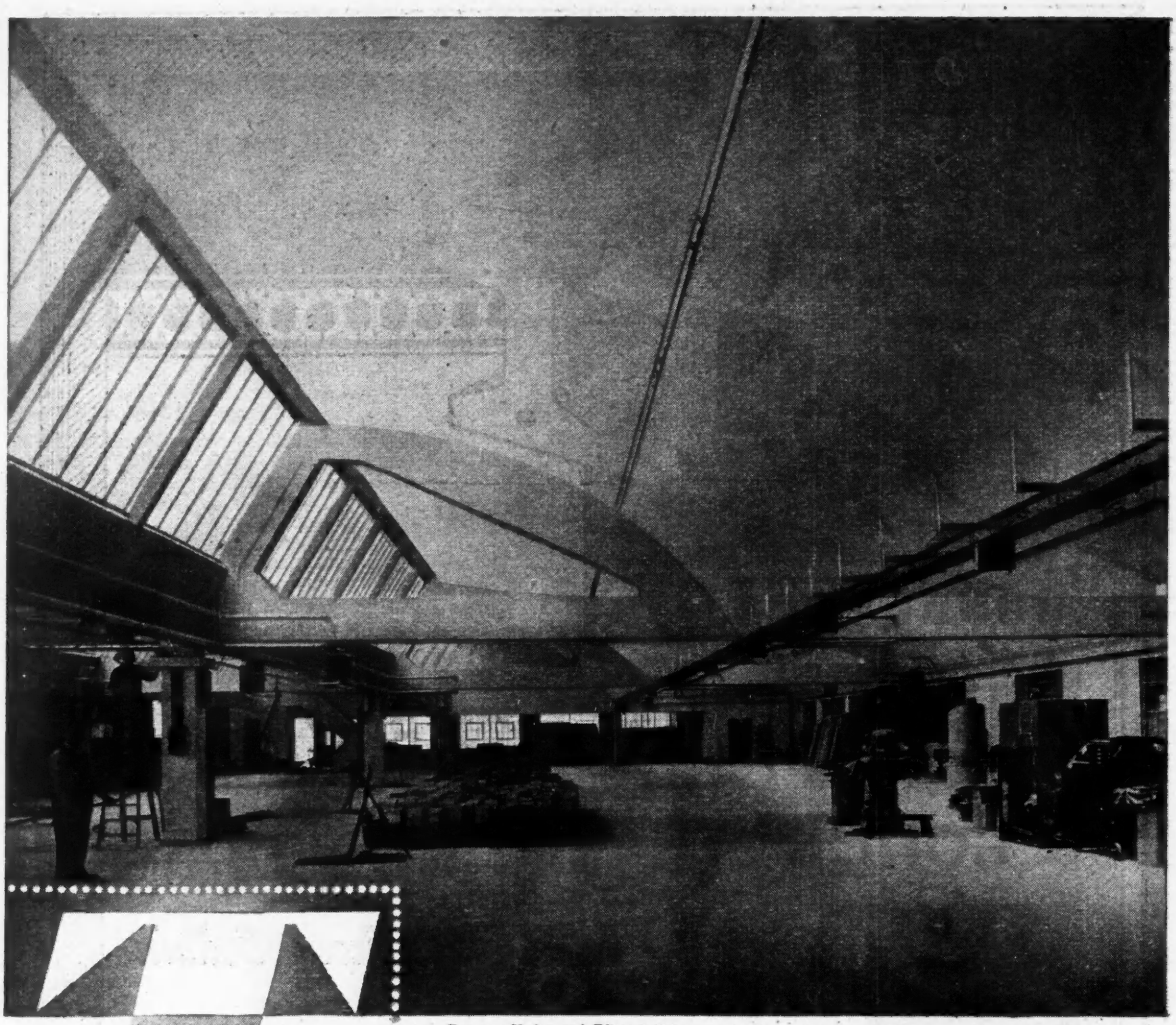
TARMAC LIMITED, VINCULUM DEPT. (*West Midlands, also Sussex and Hants*)
ETTINGSHALL, WOLVERHAMPTON — 'PHONE: BILSTON 41101

WOOLAWAY CONSTRUCTIONS LIMITED (*South Wales*)
LANELAY WORKS, PONTYCLUN, GLAMORGAN — 'PHONE: PONTYCLUN 356

PRICE & COMPANY (GLASGOW) LIMITED (*Scotland*)
INCHINNAN ROAD, RENFREW — 'PHONE: RENFREW 2242/3

THE RAPID FLOOR COMPANY LTD

Telephone HOLBORN 3274-5
AFRICA HOUSE, KINGSWAY, LONDON W.C.2



Factory: Underwood, Elliott & Fisher. Architect: R. Seifert, F.R.I.B.A. Contractors: Rice & Son Ltd.

TWISTEEL and the Barrel Vault

This is a factory. Light and clean, airy and un-oppressive: it could equally well be a studio, with the curve of the barrel vault roof reflecting the ample north light evenly over broad floor areas. Note the lack of obstruction to the floor space by structural supports: and the absence of dust traps in the clean sweep of the Wireweld-reinforced Twisteel-designed roof.

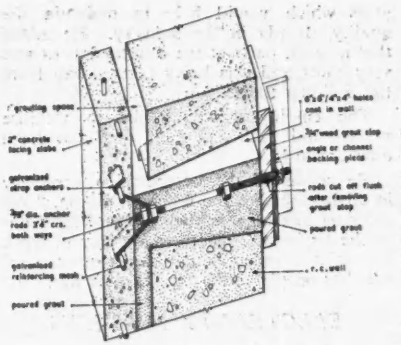
TWISTEEL REINFORCEMENT LIMITED

LONDON: 43 Upper Grosvenor Street, W.1. *Telephone: GROsvenor 8101 & 1216*
BIRMINGHAM: Alma Street, Smethwick 40. *Telephone: Smethwick 1991*
MANCHESTER: 7 Oxford Road, Manchester, 1. *Telephone: Ardwick 1691*
GLASGOW: 19 St. Vincent Place, Glasgow, C.1. *Telephone: City 6894*

cerned with the provision of an adequate key between the concrete and the rendering.

When it is known that the surface is to be rendered the procedure should be to brush the concrete and thoroughly rid it of all form oil, immediately on removal of the formwork, then to apply a spatter-dash coat consisting of one part cement, 1½ parts sand. This coat must be applied whilst there is still plenty of moisture in the concrete, otherwise the bond between the spatter-dash and the concrete is likely to be affected.

Where the concrete has been up for some time, and it is decided to render the surface, then it will be necessary to use a special key coat, such as is provided by the use of Cemprover No. 4. The mix for subsequent coats of rendering will depend upon the purpose for which the rendering is required—if for aesthetic reasons alone the mortar should not be richer than one cement, one lime, 5-6 parts sand, and the finish should be such as to produce a rough texture: for instance, Tyrolean Cullamix or the Scraped Finish.



PRECAST CONCRETE SLABS FOR FACING BUILDINGS

The Prudential Life Insurance Company's building, Los Angeles, an example of the use of large concrete facing slabs as an applied finish. Above: Detail showing method of fixing the slabs.

The mix used for rendering on other forms of concrete depends upon the nature of the backing. On no account should the rendering be stronger than the material to which it is applied, otherwise there is a great danger that the shrinkage of the rendering will cause a bond failure.

The rendering technique used in Norway, and to some extent in Sweden, is based on the use of a well-graded crushed granite sand, and a white or coloured cement applied to a thickness of approximately ¼ in. Before the mortar has had time to harden the surface is worked with a felt-covered float, constantly cleaned and dipped in water, until the surface eventually consists almost entirely of coarse aggregate.

Precast Slabs.—The facing of buildings with natural stone is accepted as a traditional building technique. In recent years, cast and reconstructed stone has largely supplanted the use of natural stone, owing to the saving in cost, and the fact that dowel and cramp holes can be readily cast in the slabs during manufacture.

The possibilities for colour and texture using precast slabs are enormous. Many of the most colourful natural aggregates are unsuitable, or are too expensive, for normal structural concrete, but when used as an exposed aggregate held in place by a (coloured) cement mortar they can be relied upon to withstand frost and atmospheric action for an indefinite number of years. Pattern is provided both by the size and shape of the aggregate used and the dimensions and jointing of the slabs. Further advantages of using precast facing slabs are that they are made in a factory under controlled conditions, so that should any particular slab fail to come up to standard it can be scrapped at very little cost; and further that, as the slabs can form one face of the formwork, their use should show a definite saving in this connection, which can be set against the initial cost of the slabs.

Besides their use as permanent formwork such slabs can also be used as an applied finish to brick or concrete blockwork, or as cladding to a steel or concrete frame.

The author, who has been engaged for many years in research on surface finishes of concrete, is in charge of the Cement and Concrete Association's development work in this field. He has recently lectured in the Ministry of Works' lecture programme.

KITCHEN PLANNING

A talk on kitchen planning, with special reference to points revealed in a competition on this theme recently organised by the Electrical Association for Women, will be given at the prize presentation, to be held at the ELMA Lighting Service Bureau, 2 Savoy Hill, WC2, at 2.45 p.m. on November 25. The speaker will be Mr. A. L. Osborne, FRIBA, who was one of the judges.

CONCRETE UNIFORMITY

Instruments for Control

TO obtain uniform concrete either allowance must be made for the different moisture contents of different batches of aggregate or the workability of the concrete must be controlled at a constant value. Any such control must not involve complicated operations or equipment and any tests required must be easy and quick to make on the site, preferably without employing specially trained workers.

Two simple pieces of equipment have been developed by the Road Research Laboratory (DSIR) which can be operated satisfactorily by unskilled workers. They are a buoyancy moisture-meter and a compacting factor apparatus. The moisture-meter can be used to measure the amount of water in any type of damp aggregate or sand. It consists of a simple balance so equipped that the sample of aggregate can be weighed in both air and water to determine the percentage by weight of water which it contains. The apparatus is self-contained and has no delicate parts. It gives results which are as accurate as those obtained by a drying test and is very rapid in operation. The percentage moisture content is read off on a scale and the amount of water to be added at the mixer read off from a simple chart.

The compacting factor apparatus is equally simple and is used to check the uniformity of the workability of the concrete. It consists of an assembly of three containers set vertically, the upper two having discharge doors at their bases. The sample having been placed in the upper container is allowed to drop successively into the other two containers. The concrete in the lowest container (a cylinder) is struck off level and automatically weighed. The weight is registered on a dial in terms of its divergence from the target value. The dial indicates directly the amount of water to be added or subtracted from the nominal quantity of water added to the mix.

DRAINAGE SYSTEMS

BRS Recommendations

BLOCKAGES in domestic drainage systems cost local authorities £100,000 a year to clear. Most of the trouble could be avoided if drainage systems were better designed, properly constructed and reasonably used. These facts are brought out as a result of a survey of domestic drainage systems carried out by the Building Research Station.

Most blockages were found to take place at intercepting traps, manholes, bends and junctions. Designs which included unnecessary bends were found to increase the danger of blockage. Trouble can be caused by having pipes too large in section; the section used should be such as to ensure that there is sufficient depth of flow to keep the pipes clear.

The practice of rendering manhole walls was found to lead to trouble when the rendering fell and blocked the inverts. Badly made joints, in which mortar is forced through into the pipe to form an obstruction, can cause waste material to build up and block the pipe. The use of straight pipes to form large radius curves can lead to a great deal of trouble; the gap between the pipe faces which is formed at the outer angle of each joint tends to collect material which eventually causes a blockage.

BUILDERS' CO-OPERATION WITH MoW

National President's Pledge

MR. G. W. GROSVENOR, National president, speaking at the diamond jubilee dinner of the Brighton, Hove and District Association of Building Trades' Employers, held at Brighton, on November 12, said: "We have already promised to co-operate closely with Mr. Nigel Birch, the new Minister of Works. He has arrived at a time when, owing to the abolition of building controls, our relations with his Ministry will be much more general than hitherto. The Ministry, as well as ourselves, will now be able to concentrate more on the solution of the many problems which still remain in the fields of research, organisation and training."

THE NEW PLYMOUTH

Builders' Dinner

SPEAKING at the annual dinner of the Plymouth and District Association of Building Trades Employers on November 11, MR. G. W. ENOCH, president of the South-Western Federation of Building Trades Employers, said the old Plymouth was being replaced with a new city that was fast capturing their affection. Builders had claimed for many years that they would not give of their best until they were freed from controls, and now that these had been done away with more factories, houses, hospitals, and schools had been erected than under State control.

The president of the Plymouth Association, MR. R. R. MORLEY, said they should make special efforts to cater for the visitor and the motorist in the city. It was essential that they should provide adequate car parking facilities and make every motorist welcome. THE LORD MAYOR, who was a guest at the dinner, said provision had been made in the Plan for Plymouth for car parks accommodating 1,500 cars.

The chairman of Plymouth housing committee, who was a guest at the dinner, said there was still £10m. worth of building work to be done in the city, and £7m. worth of that would be spent on housing. The Housing Repairs and Rents Act would also give the Corporation a great chance to clear away the slums.

STABLE PRICES

Employers' First Aim

DIFFICULTIES facing the building industry, including high costs and certain shortages of materials, were outlined by MR. A. E. DESBOROUGH, president of the Eastern Federation of Building Trades Employers, at the annual dinner of the Woodbridge and District Association of Building Trades Employers held at the Crown Hotel, Woodbridge, on November 12. Chairman was Mr. F. Ingram Smith.

"There are many difficulties today with which the building trades are confronted," Mr. Desborough said. He remarked on the recent rise in pay for some members of the industry and stated that there was likely to be a demand in the near future from operatives for a fourpence an hour rise. This, he said, would mean £40m. throughout the country, per year.

"We would like to see an improvement in the quality of building work," the speaker said. Several trainee schemes were in progress which would help to maintain the quality already in the industry. He added that in some parts of the country labour was very short and was being taken away from the building trades.

The employers would like to stabilise prices—and that was their first aim from now onwards.

He spoke of the co-operation necessary in all branches of the industry, saying, "We are now in danger of being priced right out of the business." There was plenty of work for builders today, but it was a question of whether people could pay for it or not.

ELECTRICITY SERVICES

More Installations Needed

BUILDERS in the Birmingham district have been informed by the Midlands Electricity Board that unless they provide more electrical installations in new houses than many have been doing, the Board will require a financial contribution towards the cost of laying mains.

In a circular to 400 local builders signed by the Birmingham sub-area manager, Mr. Emil Braathen, the Board says: "It has become quite evident from our recent investigations that a far greater usage of electricity is necessary in new housing estates if we are to obtain a reasonable return in relation to the capital cost of providing such supplies."

The Board points out that whilst some builders are providing a satisfactory socket outlet installation, and are also making provision for cookers and providing immersion heaters, in other instances the provision falls far short of the recommendations in the Housing Manual of 1949.

Reaction to this circular on the part of the builders has been in the main to feel that the Board is putting the burden of increased costs on to one section of the community. On one new estate which a prominent firm of builders is erecting, the Board has required it to install immersion heaters, cooker wiring to control units and normal socket outlets in 200 houses, or to pay a contribution of £2,500.

MULTI-STOREY FLATS

Opposition at Liverpool

OPPOSITION to the principle of multi-storey flats in the city was made by Socialist members of the Liverpool City Council at its last meeting.

It arose from a report of a deputation of the housing committee which recently visited America to study multi-storey construction. The opposition was started by CLLR. H. DAILEY, who said if the recommendations in the report were implemented Liverpool would be building flats to the height of 19 storeys.

ALD. H. N. BEWLEY, chairman of the housing committee, repudiated this, and said there was no intention of going beyond 10 storeys.

CLLR. F. H. CAIN, deputy leader of the Labour Group, said nobody wanted flats, and he had always opposed those "monstrosities" and always would.

ALD. THE REV. H. D. LONGBOTTOM told the Socialists to be realistic. He agreed nobody preferred flats to ordinary houses, but the only alternative in Liverpool was for the 50,000 applicants to reside outside the city boundaries. There was a famine in the city boundaries in land for house building, and they must either build upwards or seek overspill accommodation.

BRITISH STANDARDS

Oil-based Paints

THE British Standards Institution has just issued twelve new standards for oil-based paints, and, consequent upon the issue of these, the following standards have been withdrawn: BS261-2, 293-5, and 371, dealing with ready-mixed paints (oil gloss); and BS 929, and 1011, covering ready-mixed oil paints, and red lead ready-mixed paints. These standards have been produced with the full co-operation of the paint manufacturers.

Of the existing standards, BS 929 was first introduced as a war emergency specification covering paints of a generally lower composition and performance standard. In framing the new specifications, reversion to a normal standard has been effected.

The new standards, BS 2521-4 for priming paints, price 3s., include one lead base primer for woodwork, one leadless grey primer for interior use, three lead base primers for iron and steel and one red oxide primer for iron and steel. These priming paints are designed for use under undercoating and finishing paints complying with BS 2525-32 but can also be used under conventional hard gloss paints provided appropriate drying times are allowed before the applications of the undercoatings.

BS 2525-32, price 6s., covers undercoating and finishing paints of the types known as "straight linseed oil paints." These British Standards do not apply to those types of paint known under such titles as hard gloss paint, enamel paint, etc., and the paints manufactured to these standards will not have the brushing properties or the finish and gloss of such types of paint. The paints are designed for the protection of exterior surfaces.

BS2525 gives two basic compositions which between them cover twelve colours of undercoating paints. A table is included indicating which of these undercoats is appropriate for each of 91 colours given in BS 381C, to which of these undecoats is BS 2526-32 may be made. Requirements are stated, as appropriate for composition, consistency, drying time, water content and keeping properties and for colour, finish and opacity. Appendices describe sampling technique and give methods of test.

Polythene-insulated Cables

THE British Standards Institution has also published a revision of BS1557, entitled "Polythene-insulated cables, sheathed with polyvinyl chloride, for electric power and lighting up to 250 volts," price 5s.,

This edition supersedes BS1557:1949, but deals only with polythene-insulated cables sheathed with polyvinyl chloride. The principal feature of the new edition is the reduction in insulation and sheath thickness which has been found possible as a result of experience since the previous publication.

It has been considered desirable to specify tinned copper conductors as standard, the main advantages being ease of jointing and resistance to corrosion. The standard reference temperature of 20 deg. C. has been adopted, as in other recent British Standards for cables. It should be noted that the 250 volt cables specified in this standard are deemed to be suitable for use on a three-phase 440 volt system having its neutral point solidly earthed.

Copies of the above Standards may be obtained from the British Standards Institution, Sales Branch, 2, Park-street, W1.

Just on one million square yards of BISON flooring have been used in Scottish housing since the war

Illustrated is an aerial view of the Pollok Housing Area—Glasgow. Architect: Archibald G. Jury, F.R.I.B.A., F.R.San.I., F.I.Arb., A.I.Struct.E., Director of Housing, Corporation of Glasgow.

BISON floors, beams and precast frame structures

MADE BY THE LARGEST MANUFACTURERS OF CONSTRUCTIONAL PRESTRESSED CONCRETE IN THE WORLD

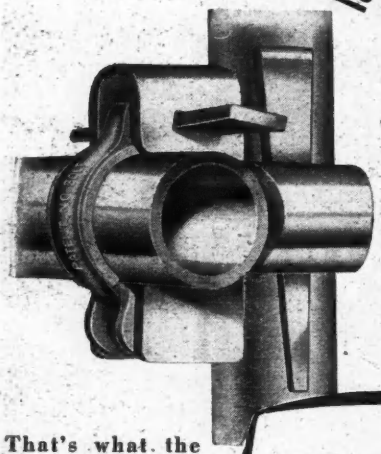
CONCRETE LIMITED

LONDON Green Lane, Hounslow, Middlesex. Hounslow 2323
LEEDS Stourton, Leeds, 10. Leeds 75421
LICHFIELD Dovehouse Fields, Lichfield, Staffs. Lichfield 2404
FALKIRK Etna Road, Falkirk. Falkirk 1585
EDINBURGH Sighthill Industrial Estate, Edinburgh. Craiglockhart 1729

CON 10

five times the work . . .

. . . for the same labour costs



Supplied also with CAPTIVE WEDGES which cannot be lost. Quick delivery ex-stock and an efficient service guaranteed. NO-BOLT Scaffolding Couplers are rust-proof (Sheradized).

NO-BOLT
Double Coupler
Type S.F.W.

That's what the NO-BOLT Coupler does for you when it comes to scaffolding erection. The NO-BOLT Double Coupler has no nuts or bolts to tighten, jam or get lost—no threads to cross or rust. Simply a wedge—a tap with a hammer secures it, another tap frees it. The fastest, safest, simplest method of scaffold erection—and no maintenance. With the NO-BOLT system any type of scaffolding can be erected at less cost. An 80% saving is quite usual. Why not write for details?

BB&EA

Demonstrations arranged to prove that with the NO-BOLT System any form of scaffolding can be erected at less cost.

BRITISH BUILDING & ENGINEERING APPLIANCES LTD.
63-65 London Road, Sandy, Bedfordshire.
Tel.: Sandy 104

E. & F. N. SPON

SPON'S ARCHITECTS' AND BUILDERS' PRICE BOOK

1954-1955 - 80th Edition

Edited by DAVIS, BELFIELD & EVEREST
Chartered Quantity Surveyors

765 pages *25s. net (postage 9d.)*

First reviews of the current edition:

"*As a handy form of easy reference to prices for all those in the building industry, this year's 'Spon's' is, as usual, invaluable.*"

CONTRACT JOURNAL

"*Will be welcomed, as in former years, by architects, clerks of works, builders and surveyors . . . The accuracy of the information and the ease with which it can be found, make this book invaluable for estimating building work of all kinds.*"

BUILDING INDUSTRIES

SPON'S PRACTICAL BUILDERS' HANDBOOK

Ninth edition.
Completely revised and enlarged

Edited by A. W. D. FRYER, A.I.A.S.

608 pages *30s. net (postage 9d.)*

"*An encyclopaedia of practical information for those engaged in the building industry . . . Deals with the whole field of building operations under headings arranged alphabetically and copiously cross-referenced.*"

MASTER BUILDER

"*A most efficient day-to-day guide for the office.*"

ILLUSTRATED CARPENTER AND BUILDER

22 Henrietta Street, London, W.C.2

The Builder

CURRENT PRICES OF MATERIALS

THE information given on these pages has been specially compiled for *The Builder* and is copyright. It is the intention that the details given should indicate fair average prices of materials not necessarily the highest or the lowest. The prices apply to large quantities of materials loaded at works, delivered at London Stations or at site in London Area as stated. Prices for smaller quantities ex merchants warehouse will necessarily be higher so as to include the stocking and handling costs involved. Due to the exceptional circumstances now prevailing it is recommended that the prices of materials should be confirmed by inquiry from suppliers and merchants.

AGGREGATES AND SAND

Delivered site in full lorry loads. Average of prices for Boroughs of Westminster, Paddington, Holborn and St. Pancras.

		£	s.	d.
Pit Ballast	per yd.	1	3	1
Pit Sand	,,	1	1	8
Washed Sand	,,	1	3	8
¼ in. Shingle	,,	1	0	0
¼ in. Broken Brick	,,		19	3
Pan Breeze	,,		9	6
Fine or Coarse Foamed Slag Aggregate ... ... 2 yds. of fine and 2.6 yds. of coarse per ton	per ton	3	0	9

CEMENT, etc.

Including non-returnable jute sacks or paper bags.

		£	s.	d.
Best British Portland Cement. Standard Specification delivered Charing Cross area.				
6-ton loads and upwards, site	per ton	4	16	6
1 to 6 tons, site	,,	5	5	6
Ferrocrete Rapid Hardening Cement in 6-ton loads and upwards to site	,,	5	4	6
1 to 6 ton do. site	,,	5	13	6
Aquacrete Water Repellent Cement. 32s. 6d. per ton on ordinary cement prices.				
Red, Buff or Khaki Colorcrete in 6-ton lots ...	,,	6	18	0
Other colours according to colour.				
In 4-ton lots from 211s. 9d. to 435s. 9d. per ton.				
White Portland Cement	,,	12	17	0
Under 1 ton	per cwt.		15	4
417 Cement (Ultra Rapid Hardening) in 6-ton lots and upwards	per ton	6	9	0
Super Cement (Waterproof), 32s. 6d. per ton above Portland Cement.				
Cullamix Tyrolean Finish, £9 4s. 3d. to £10 17s. 9d. (1-ton loads and upwards).				
Lightning and Ciment Fondu Brands High Aluminous cement, 6-ton lots and up	,,	14	0	9
Stourbridge Fireclay, 6-ton loads at Railway Depot, London	,,	6	2	3

BRICKS

		£	s.	d.
Full Loads.				
First Hard Stocks	per 1,000	11	7	0
Second Hard Stocks	,,	10	11	0
Mild Stocks	,,	8	16	6
All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job.				
2½ in. Nominal Fletton Bricks to sites in W.C.				
District Commons	,,	5	13	0
Cellular do.	,,	5	13	0
Keyed do.	,,	5	15	0
Rustics	,,	6	18	0
Cellular Rustics	,,	6	18	0
Single Bullnose do.	,,	6	13	0
Sandfaced	,,	7	13	0
Best Blue Pressed Staffs (London Stations) ...	,,	24	19	6
Do. Bullnose (London Stations)	,,	25	13	6
Blue Wire Cuts (London Stations)	,,	22	11	0
Midhurst Lime Bricks (London Sites)	,,	10	3	0
Uxbridge Whites (London Sites)	,,	9	1	6
2½ in. Best Stourbridge Fire Bricks (London Stations)	,,	24	6	0
3 in. do. (London Stations)	,,	29	3	3
2½ in. Machine-made Sandfaced Red Facings (London Sites)	,,	13	19	6
2½ in. Machine-made Multi Red Facings (London Sites)	,,	14	4	6
2½ in. Hand-made Sandfaced Red Facings (London Sites)	,,	14	7	0
2½ in. Hand-made Sandfaced Multi-Colour Facings (London Sites)	,,	14	7	0
Hand-made Sandfaced Cherry Red Facings. Berkshire district (London Sites)	,,	17	5	6
Hand-made Sandfaced Multi Colour Facings. Berkshire district (London Sites)	,,	17	5	6
Rubber Bricks for ganged arches (London Sites) ...	per 1,000	41	10	0
2½ in. Surrey Clamp Burnt Multi Stock Facings (London Sites)	,,	13	6	0
2½ in. Surrey Kiln Burnt Multi Stock Facings (London Sites)	,,	14	4	6
Glazed Bricks (London sites), White, Ivory, Brown—				
Stretchers	,,	64	0	0
Headers	,,	63	0	0
Quoins, Bullnose and 4½ in. Flats	,,	80	0	0
Double Stretchers	,,	85	0	0
Double Headers	,,	77	10	0
One side and two ends	,,	87	0	0
Two sides and one end	,,	89	10	0
Splays and Squints	,,	83	0	0

Cream and Buff £3 extra over White. Other colours, hard glaze, £8 10s. 0d. extra over White. All above prices plus 7½% for Best quality and plus 7½% less 10% for Second quality.

PARTITION SLABS, etc.

Delivered Central London Area.

HOLLOW CLAY PARTITION BLOCKS (Keyed)

	Minimum lorry loads.		£	s.	d.
2 in.	140 yds.	per yd. sup.		4	3
2½ in.	140 yds.	,,		4	6
3 in.	120 yds.	,,		5	2
4 in. (6 cavity) ...	95 yds.	,,		6	7
Half blocks at no extra charge.					

CLINKER CONCRETE.

			£	s.	d.
2 in.	100 yds.	,,		3	7
2½ in.	85 yds.	,,		4	2
3 in.	75 yds.	,,		5	0
4 in.	55 yds.	,,		6	2

CRANHAM

		£	s.	d.
2 in.	,,		6	8
2½ in.	,,		7	4
3 in.	,,		8	7
4 in.	,,		10	7
4½ in. Load bearing quality	,,		11	8

FLOOR BLOCKS

		£	s.	d.
3 in. Floor Blocks 12 in. by 12 in. delivered in full lorry-loads	per 1,000	32	11	0
4 in. do.	,,	34	18	0
5 in. do.	,,	41	11	0
6 in. do.	,,	46	16	0
7 in. do.	,,	56	18	0
8 in. do.	,,	66	14	0

STONEWARE DRAIN PIPES, etc.

The following are the percentages to be added to the Standard List prices delivered London Area.

	Over 2 tons	Over 100 Pieces under 2 tons	Under 100 Pieces under 2 tons
Best Quality	+67½%	+97½%	+107½%
B.S.S. Best do.	+10% +67½%	+10% +97½%	+10% +107½%
Tested Quality	+37½% +67½%	+37½% +97½%	+37½% +107½%
B.S.S. Tested do.	+47½% +67½%	+47½% +97½%	+47½% +107½%

		£	s.	d.
3 in. Land Drain Pipes (in 12 in. lengths)	per 1,000	10	13	6
4 in. do.	,,	14	2	0

STONE

		£	s.	d.
Bath Stone—				
Monks Park	per ft. cube		7	10
St. Aldhelm Box Ground	,,		8	10
Delivered in railway trucks at South Lambeth B.R. Western Region				
Doulting Stone Random Blocks. Delivered London area	,,		8	4
Beer Stone. Delivered London area	,,		8	0
Portland Stone—				
Brown Whitbed in random blocks, 20 ft. average delivered in railway trucks at Nine Elms, B.R. Southern Region	,,		8	1½
Yorkshire Stone—Blue Robin Hood Quality.				
Delivered to site London in 6-ton lots.				
9 in. × 3 in. Rubbed, weathered, throated and stooled cills	per ft. cube	3	4	3
12 in. × 6 in. do. do.	,,	2	6	0
12 in. × 3 in. Plain coping, twice throated ...	,,	1	15	4
12 in. × 3 in. Weathered and twice throated coping	,,	2	7	4
14 in. × 6 in. do. do.	,,	2	2	8
4½ in. × 9 in. Plinth, rubbed on top and face ...	,,	1	18	1
3 in. sawn two sides Slabs, random sizes ...	per ft. sup.		6	9

STONE—*continued*

		£	s.	d.
Templates and Cover Stones, 3 in., 4 in. and 6 in. thick, edges coped for rendered brickwork ...	per ft. cube	1	3	5
Do. do. fair one edge for fair faced brickwork		1	7	10
Hard York—				
12 in. ×2 in. Square Steps, rubbed on top and edge	per ft. run		8	2
14 in. × 3 in. Round-nosed Steps, rubbed on top and front	per ft. cube	2	3	8
12 in. ×6 in. Plain Steps, rubbed top and front ...	,,	1	18	3
2 in. Rubbed and Jointed Paving, given sizes ...	per ft. sup.		7	10
2 in. Sawn Paving, edges squared, in random sizes	per yd. sup	2	13	10

TILES and PANTILES

Delivered London area by road in 6 tons or over per 1,000

Machine-made Pantiles and French pattern Tiles from Lincolnshire district	29	8	0
Hand-made Pantiles Berkshire district	47	10	0
Hand-made Double Roman Bridgwater district	58	13	6
Hand-made 10½ × 6½ tiles Berkshire district	13	1	9
Machine-made 10½ × 6½ Staffordshire district	13	8	9
Hand-made Hip and Valley tiles per doz.	1	8	9
Machine-made Hip and Valley tiles do.	1	6	6
Concrete tiles 10½ × 6½	7	14	6
do. Interlocking (49S)	18	9	6

NOTE.—Breakage in transit, purchasers' responsibility.

SLATES

First-quality Slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

24 × 12	113	0	4
22 × 12	93	16	0
22 × 11	84	15	0
20 × 12	79	19	6
20 × 10	74	12	0
18 × 10	53	18	9
18 × 9	47	5	6
16 × 10	44	7	0
16 × 8	34	10	6

NOTE.—Breakage in transit, purchasers' responsibility.

TIMBER

Softwood—					
Joinery quality	Ex. Wharf	per standard	£105 to £125		
Carcassing quality	do.	,,	£95 to £100		
1 in. Tongued and Grooved Flooring	do.	,,	£106	0	0
Hardwood—					
Mahogany—African S.E. ...	do.	per ft. cube	1	5	0
do. Honduras do. ...	do.	,,	3	5	0
Oak European do. ...	do.	,,	1	18	6
do. Japanese do. ...	do.	,,	2	5	0
do. English Logs sawn	do.	,,	1	5	0
Teak 8 in. average S.E.	do.	,,	3	0	0
Walnut African Logs sawn	do.	,,	1	1	6

DOORS (in Lots I-II)

Delivered London area.

1⅛ in. 4 Horizontal Panel Pattern 4 in. deal			
2 ft. 0 in. × 6 ft. 6 in. ... ... each	1	12	0
2 ft. 3 in. × 6 ft. 6 in. ... ... ,,	1	13	0
2 ft. 6 in. × 6 ft. 6 in. ... ... ,,	1	14	0
2 ft. 9 in. × 6 ft. 6 in. ... ... ,,	1	16	6
2 in. do. but top panel open. Pattern 4 × G in deal			
2 ft. 6 in. × 6 ft. 6 in. ... ... ,,	2	9	0
2 ft. 9 in. × 6 ft. 6 in. ... ... ,,	2	11	6
2 in. Panel, top panel open. Pattern 2 × G in deal			
2 ft. 6 in. × 6 ft. 6 in. ... ... ,,	2	1	9
2 ft. 9 in. × 6 ft. 6 in. ... ... ,,	2	3	6

SUNDRIES

Delivered London area

1 in. Wood Wool Slabs, 6 ft. 0 in. × 2 ft. 0 in. in quantities of 1 ton (89 yds. to 1 ton) ... ... per yd.	5	8	
1½ in. do. (67 yds. to 1 ton) ... ... ,,	7	4	
2 in. do. (52 yds. to 1 ton) ... ... ,,	8	11½	
2½ in. do. (45 yds. to 1 ton) ... ... ,,	10	3	
3 in. do. (39 yds. to 1 ton) ... ... ,,	11	5½	
Quantities under 1 ton add 1d. per ½ in. of thickness.			
½ in. imported insulation Board, quantities over 5,000 sq. ft. per 100 sq. ft.	2	2	6
¼ in. Hardboard do. ... ... ,,	2	1	6
⅛ in. do. do. ... ... ,,	3	2	6
⅛ in. Asbestos Flat Building Sheets ... ... per yd. sup		3	2
Roofing Felt, 1-ply ... ... ,,		1	6
do. 2-ply ... ... ,,		1	9
Best Scotch Glue, in slabs ... ... per ½ cwt.	5	0	0
do. pearl ... ... ,,	5	5	0
Croid Glue ... ... 28 lb.	2	6	0
Cut Nails 3 in. (1-ton lots) ... ... per ton	56	5	0
do. 4 in. and up (1-ton lots) ... ... ,,	52	15	0
Wire Nails, 3 in. (4-cwt. lots) ... ... per cwt.	2	16	3
do. 4 in. and up (4-cwt. lots) ... ... ,,	2	12	9

METALS

STEEL JOISTS, ETC.

Basis Joists—			
6 in. × 5 in., 8 in. × 5 in., 8 in. × 6 in., 10 in. × 6 in. 12 in. × 6 in. plain cut to lengths delivered London area ... ... per ton	38	7	6
Extra for sizes			
3 in. × 1½ in. ... ... ,,	3	10	0
3 in. × 3 in., 4 in. × 3 in., 5 in. × 2½ in. ... ,,	1	5	0
4 in. × 1¾ in. ... ... ,,	3	0	0
4½ in. × 1½ in., 24 in. × 7½ in. ... ... ,,	2	0	0
5 in. × 3 in., 22 in. × 7 in. ... ... ,,	1	0	0

6 in. × 3 in. ... ... per ton	1	10	0
9 in. × 7 in. ... ... ,,		5	0
10 in. × 4½ in. 12 in. × 5 in. ... ... ,,		15	0
5 in. × 4½ in. 6 in. × 4½ in. 7 in. × 3½ in. 7 in. × 4 in. 8 in. × 4 in. 9 in. × 4 in. 10 in. × 5 in. 10 in. × 8 in. 12 in. × 8 in. 13 in. × 5 in. 14 in. × 5½ in. 14 in. × 6 in. 14 in. × 8 in. 15 in. × 5 in. 15 in. × 6 in. 16 in. × 6 in. 16 in. × 8 in. 18 in. × 6 in. 18 in. × 7 in. 18 in. × 8 in. 20 in. × 6½ in. 20 in. × 7½ in. ... ... ,,		10	0
Steel angles average price ... ... ,,	39	12	6
Steel tees average price ... ... ,,	40	12	6
Fabricated work delivered London—			
R.S. Joists cut and fitted ... ... ,,	53	7	6
Compound girders ... ... ,,	58	12	6
Stanchions ... ... ,,	63	17	6
Compound stanchions ... ... ,,	67	7	6
In Roof Work—Trusses and Purlins ... ... ,,	79	7	6
Average prices not for awkward work.			
Mild Steel Ferro-Concrete bars to BSS785 ex London			
Stock ¼ in. diam., and upwards ... ... ,,	39	14	6
¼ in. diam. ... ...per ton extra	3	12	0
⅛ in. do. ... ... ,,	2	17	0
⅜ in. do. ... ... ,,	2	2	0
½ in. do. ... ... ,,	1	7	0

MILD STEEL TUBES

Tubes to BSS1387 and Fittings. List prices and following discounts:

Galvanised Tube—	W.I. Fittings	Malleable Fittings
Class A — 13⅛%		
Class B + 7⅛%	Light + 23½%	Malleable List — 35% + 40%
Class C + 23½%	Heavy + 30½%	
Black—		
Class A — 22%		
Class B — 11½%	Light + 11%	Malleable List — 35%
Class C + 3½%	Heavy + 18½%	

C.I. HALF-ROUND GUTTERS

Delivered London per yd. in 6-ft. lengths	Gutters	Nozzles	Stop Ends
3 in.	3/2	2/9	/10
3½ in.	3/5½	3/–	/10
4 in.	4/5½	3/5	1/2
4½ in.	4/10½	3/9	1/6
5 in.	5/5½	4/2	1/8

C.I.O.G. GUTTERS

3 in.	4/1	3/8	/11
3½ in.	4/6½	3/8	1/2
4 in.	5/–	3/9	1/6
4½ in.	5/5½	4/5	1/8
5 in.	5/11	5/1	1/11

C.I. RAIN-WATER PIPES

Per yd. in 6-ft. lengths	Pipe	Bends	Branches
2 in.	6/5½	3/5	4/10
2½ in.	6/9	3/9	6/8
3 in.	7/7	4/9	7/3
3½ in.	8/7	5/8	8/7
4 in.	9/11½	6/11	10/2

L.C.C. COATED SOIL PIPES

2 in.	7/7½	5/10	7/2
2½ in.	8/1	6/6	8/11
3 in.	9/0½	7/2	10/8
3½ in.	10/1½	8/11	12/5
4 in.	11/6½	10/–	14/7

Above prices for gutters, rain-water and soil pipes for under 3 cwt. lots only. Lots over 3 cwt. see List No. 3200 dated May 1, 1952, plus 10% and tonnage allowance. 4-ton lots 5 per cent, 2-ton lots 2½ per cent.

L.C.C. COATED DRAIN PIPES

In 9-ft.

	cwt.	qr.	lb.	per yd.	Bends	Branches
4 in.	1	1	17	24/5	16/6	28/9
6 in.	2	0	1	36/3	34/3	58/9

ASBESTOS RAIN-WATER PIPES AND FITTINGS

Orders under £30 less 12½ per cent. discount.
Orders over £30 less 17½ per cent. discount.

	2 in.	2½ in.	3 in.	4 in.
Pipes 6-ft. lengths ...per yd.	3/9	4/–	4/10	6/5
Shoes ... ... each	2/5	2/8	3/2	4/3
Single Branches ... ,,	3/9	4/6	5/4	7/6
Bends square or obtuse ,,	2/8	2/11	3/9	5/4
Swan Necks 4½ in. proj. ,,	2/11	3/9	4/3	5/11
do. 6 in. do. ,,	3/2	3/9	4/10	6/5

ASBESTOS O.G. GUTTERS AND FITTINGS

	4 in.	4½ in.	5 in.	6 in.
Gutters 6-ft. lengths ...per yd.	3/7	3/11	4/8	5/7½
Drop ends ... ... each	2/10	3/4	3/10	4/7
Stop Ends ... ... ,,	/10	/11	1/–	1/2
Angles ... ... ,,	2/11	3/5	4/1	4/10
Nozzles ... ... ,,	2/10	3/4	3/10	4/7
Union Clips ... ... ,,	1/5	1/8	2/1	2/5

ASBESTOS HALF-ROUND GUTTERS AND FITTINGS

	3 in.	4 in.	4½ in.	5 in.	6 in.
Gutters 6-ft. lengths ...per yd.	2/6	2/11½	3/0½	3/7	5/–
Drop ends ... ... each	2/1	2/5	2/8	2/11	4/3
Stop ends ... ... ,,	/9	/10	/11	1/–	1/2
Angles ... ... ,,	2/5	2/8	2/11	3/2	4/3
Nozzles ... ... ,,	2/1	2/5	2/8	2/11	4/3
Union Clips ... ... ,,	1/–	1/1	1/2	1/4	2/–

This is a high level job

They're putting on a roof that is going to last. That's one thing you can be sure about when you use T.I. corrugated aluminium sheet. It cannot rust and, even in the worst possible industrial atmospheres, laden with smoke, fumes and chemical vapours, it will resist corrosion. In addition, corrugated aluminium sheet is easily handled and erected—it is light on labour and light on substructure.

For corrugated sheet

PUT Aluminium FIRST
AND TI IN FRONT OF IT

For further information apply to your local Builders' Merchant or Roofing Contractor. If necessary a list of local suppliers can be obtained on application to

T.I. ALUMINIUM LTD., REDFERN ROAD, TYSELEY, BIRMINGHAM 11.

ALUMINIUM AND ALUMINIUM ALLOY INGOT, BILLETS, SLABS, SHEET, STRIP, PLATE, TUBES AND EXTRUSIONS TO ALL COMMERCIAL, A.I.D. AND LLOYD'S SPECIFICATIONS. *A TI COMPANY*

INDISPENSABLE for CEMENT work

CEMENT PROOFING
TRICOSAL
HARDENING PRODUCTS

TRICOSAL A liquid for integral Hardening Waterproofing and resistance to Acids and Oils, incorporated throughout the whole thickness of Concrete, Granolithic and Cement Renderings, etc., by absolute positive equal distribution.

SURFACE
FLOROSAL
CEMENT HARDENER

FLOROSAL A liquid for the surface Hardening of existing Concrete, Granolithic and Stone. Gives protection against Dusting, Acids and Oils. Increases resistance to wear and atmospheric disintegration.

COLOURLESS
NEOCOSAL
WATERPROOFER

NEOCOSAL A colourless liquid applied to the surface of Brick, Stone, Concrete, Renderings, etc., which penetrates into the surface and acts as a water repellent.

A. A. BYRD and CO., LIMITED (Dept. B)
210, Terminal House, Grosvenor Gardens, London, S.W.1
'Phone: SLOane 5236 'Grams: Byrdicom, Wesphone, London

METALS—*continued*

	Per ton basis in London £ s. d.
Iron—Staffordshire Crown Merchant Quality	40 2 6
Mild Steel Bars	37 17 6
Mild Steel Hoops	39 5 0

	Ex Merchant's Stock per ton Two-ton lots £ s. d.
Soft sheets C.R. and C.A.—	
20 gauge	46 14 6
24 gauge	47 19 6
26 gauge	49 9 6
Galvanised Corrugated sheets 6 ft. to 9 ft.—	
20 gauge	53 12 0
24 gauge	55 12 0
26 gauge	58 7 0
Galvanised Flat sheets C.R. and C.A.—	
20 gauge	54 12 0
24 gauge	56 12 0
26 gauge	59 7 0

Plumbers' Brass Work, Copper, Zinc, etc.

Delivered in London area.

All per doz.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
	M.O.H.					
Screwdown bib cocks Crutch head for iron	77/–	114/6				
Toilet bib cocks for iron	99/–	142/–				
Screwdown stop cocks for iron	66/–	95/9	188/–	323/6	462/–	815/–
do. with two unions for lead	89/–	132/–	234/4	419/–	554/6	1234/3
Double nut boiler screws	16/6	23/3	42/–	43/–	59/6	83/8
Heavy Croydon ball valves	68/3	155/3	237/7	433/6	614/–	
Plumbers' union brass lead to iron	17/4	21/–	34/9	60/6	74/6	145/3
	1½ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
Caps and screws	29/9	36/4	52/9	82/6	105/6	137/6
Brass sleeves			27/6	27/6	49/6	66/– 67/–
	1½ × 6 lb.		1½ × 6 lb.	2 × 7 lb.	3 × 7 lb.	
Lead P. trap with brass cleaning screws	66/–		82/–	132/–		224/–
Lead S. trap do.	79/–		98/–	161/–		290/–

Solder	s. d.
Plumbers'	per lb. 3 5
Tinmen's	„ 4 2
Blow pipe	„ 4 3

Copper tubes BSS 659/1944 on the basic price of 31⅞d. per lb. plus gauge and manufacturing extras as follows. Minimum quantities, 3 cwt.

	Extra d.	Total per lb. d.
⅛ in. × 19 gauge	12½	44½
¼ in. × 19 „	10½	39½
1 in. × 18 „	9½	41½
1¼ in. × 18 „	8½	40½
1½ in. × 18 „	8½	40½
2 in. × 17 „	10½	42½

	£ s. d.
Rolled Copper sheets up to 48 in. wide, basic price plus gauge and manufacturing extras per ton	332 15 0
Sheet Zinc, 10 gauge (25 SWG) 3 cwt. lots upwards per cwt.	7 19 6
do. 12 gauge (23 SWG) do. „	7 17 6
do. 14 gauge (21 SWG) do. „	7 16 3
Brass tubes basic price, plus gauge and manufacturing extras per lb.	2 1½

LEAD SHEET AND PIPES

Basis selling price in minimum one-ton delivery to one address in London or Home Counties

	£ s. d.
Lead Sheet, English, 3½ lb. substance and upwards per ton	147 0 0
Lead Water Pipe in coils „	148 5 0
Lead Soil Pipe 10 ft. or over 2 in. to 4 in. dia. „	149 15 0
do. over 4 in. dia. „	151 15 0
Lead Gas or Untinned Compo pipe „	149 15 0
Extras over Basis for quantities under 1 ton	
5 cwt. and under 1 ton per cwt.	2 0
3 cwt. do. 5 cwt. „	4 0
1 cwt. do. 3 cwt. „	6 0

Smaller quantities than 1 cwt. priced specially.

Supplying sheet lead and lead pipe to less than basis weights and cutting to sizes less than basis charged extra according to current trade schedule.

Allowance for Old Lead, collected £100 5s. 0d. per ton weighed at buyer's works.

PLASTER, etc.

	£ s. d.
Coarse Pink in 1-ton loads and over Delivered on Site per ton	7 6 6
do. White do. do. „	7 14 3
Sirapite Coarse do. do. „	7 9 0
do. Fine do. do. „	7 17 0
Blue Lias Lime in 6-ton loads „	6 9 6
Hydrated Lime do. „	5 12 6
Lump Lime do. „	5 2 0
White Keen's or Parian Cement in 1-ton loads „	10 4 0
Pink Keen's or Parian Cement in 1-ton loads „	9 18 6
Granite Chips in 6-ton loads „	2 6 3
Hair per cwt.	4 17 6
Gypsum Plaster Lath or Base Board ⅜ in. thick 600 yds. and over in one delivery. Delivered site per yd.	2 2
1,200 yds. „	2 1½
Gypsum Plaster Wall Boards, 3 and 4 ft. wide, 6 to 12 ft., ⅜ in. thick, 600 yds. and over in one delivery. Delivered site „	2 5
1,200 yds. „	2 4½

PAINT AND DISTEMPER

Delivered London area	£ s. d.
Ceiling Distemper per cwt.	1 7 6
Washable Distemper „	5 5 0
Gloss Paint per gal.	2 10 0
Snowcem cement paint (in 1 cwt. drums) per cwt.	3 11 0
Lead Products and Oils.	
Ground White Lead, 1 cwt. kegs per cwt.	8 18 0
Genuine White Lead Paint, 1-19 gal. lots in 1 gal. tins per gal.	3 2 0
Genuine Red Lead, Dry, 1 cwt. keg per cwt.	7 7 0
Genuine Linseed Oil Putty, 1 cwt. keg „	2 7 0
Size XD quality, 28 lb. per tin	9 0
Raw Linseed Oil (5 gal.) Drums extra per gal.	10 6
Boiled Linseed Oil (5 gal.) do. „	11 0
Sundries.	
Turpentine substitute (5 gal.) drums extra „	5 6½
do. do. (40 gal.) do. do. „	4 8½
Solignum, Brown (5 gal. cans) Exterior „	6 6
Creosote (40 gal. barrels) „	2 0
Paste Powder (1 lb. packets) per lb.	1 6
White Lining Paper per piece	1 0

VARNISHES, etc.

Delivered London area.	£ s. d.
Oak Varnish, Outside or Inside per gal.	1 12 6
Oak Pale Copal do. „	1 15 0
Hard Drying Oak for Inside „	1 17 6
Crystal Paper Varnish do. „	2 2 6
Eggshell Flat Varnish do. „	2 2 6
Finest Carriage Varnish „	2 10 0
Front Door Varnish „	1 17 6
Japan Gold Size „	1 10 0
Black Japan „	1 5 0
Brunswick Black „	1 0 0
Berlin Black „	1 5 0
Terebene „	1 5 0
Knotting (1 gal. bottles free) „	2 0 0
French and Brush Polish (do.) „	1 13 0

GLASS

Delivered London area.	Per ft. super s. d.
18 oz. Sheet Glass, Ordinary Glazing Quality. Cut Sizes	5½
24 oz. „ „ „ „ „ „	7½
26 oz. „ „ „ „ „ „	9½
32 oz. „ „ „ „ „ „	1 0
⅛ in. Rolled Plate	9
⅛ in. and ¼ in. Rough Cast	1 0
⅛ in. Figured Rolled and Cathedral, Standard patterns: White	9
do. Standard Tints	1 4½
do. Special Tints	2 9
¼ in. Cross Flexon, Pinstripe, Hammerstripe, Reeded, Reedlyte and Luminating	1 1
¼ in. Wired Cast	1 2
¼ in. Georgian Wired Cast	1 2½

Hollow Glass Blocks—	Each
P.B.2 5¾ × 5¾ × 3⅞ in.	2 9
P.B.3 7¾ × 7¾ × 3⅞ in.	4 2
P.B.32 7¾ × 7¾ × 3⅛ in.	4 2
Radiused Corner Blocks to match up with—	
P.B.2	5 3
P.B.3	6 9
P.B.32	6 9

¼ in. Polished Plate Glass, G.G. Quality—	Per ft. super
In plates not exceeding 2 ft. sup.	3 7
„ „ „ 5 ft. sup.	4 5
„ „ „ 45 ft. sup.	5 1
„ „ „ 100 ft. sup.	5 6

¼ in. Polished Plate, extra sizes, *i.e.*, plates exceeding 100 ft. sup. or 160 in. one way or 96 in. both ways. G.G. quality—

Not exceeding 135 ft. sup. or 250 in. one way or 135 in. both ways	8 4
Not exceeding 180 ft. sup. or ditto	11 3
Not exceeding 200 ft. sup., or ditto	16 0

Plates exceeding 200 ft. sup. prices on application.

Substances other than ¼ in. Polished Plate at Special Prices.

Quantity Tariff—Sheet and Sundry Glass.

The following prices apply to minimum quantities of one size and one pattern delivered by the manufacturer to one site at one time.

Description of Glass	Minimum quantity	Per ft. super s. d.
18 oz. sheet O.Q.	3,000	4
24 oz. „ „	2,000	5½
26 oz. „ „	2,000	7½
32 oz. „ „	2,000	9½
⅛ in. Rolled Plate	1,000	7½
⅛ in. Figured Rolled and Cathedral Standard Patterns, White	1,000	7½
⅛ in. Cross Flexon, Pinstripe, Hammerstripe, Reeded, Luminating and Spotlyte	1,000	10½
⅛ in. and ¼ in. Rolled Plate or Rough Cast	2,000	10½
¼ in. Wired Cast, Hexagonal	2,000	11½
¼ in. Georgian Wired Cast	2,000	1 0½

The Builder

CURRENT RATES OF WAGES

AS FROM OCTOBER 4, 1954. **(Every endeavour is made to ensure accuracy but we cannot be responsible for errors.)**

KEY TO SCHEDULE OF GRADE RATES.

Grade Classification.	A	A1	A2	A3
Craftsmen	3/9	3/8½	3/8	3/7½
Labourers	3/3½	3/3	3/2½	3/2

Town.	Grade.
Aberavon	A
Aberdare	A
Abergavenny	A
Abingdon	A2
Accrington	A
Addlestone	A
Aldeburgh	A2
Aldershot District	A2
Alfreton U.D.	A
Alnwick	A1
Altrincham	A
Amble	A1
Amersham	A1
Ammanford	A
Andover	A2
Ardingly	A2
Arundel	A2
Ascot	A2
Ashby-de-la-Zouch U.D.	A
Ashby Woulds U.D.	A
Ashford (Kent)	A2
Ashford (Middlesex)	A
Ashington	A
Ashtead	A
Ashton-under-Lyne	A
Aspatria and Brayton	A2
Atherstone R.D. (parts of)	A
Aylesbury	A2
Aylesby (Yorks)	A
Aylesham	A2
Bagshot	A2
Bakewell U.D.	A2
Banbury	A2
Barnard Castle U.D.	A
Barnoldswick U.D.	A
Barnsley	A
Barrow-in-Furness	A
Barrow-upon-Soar R.D. (exc. Thrussington A2)	A
Barry	A
Basford R.D. (exc. Willough-by-on-the-Wolds A1)	A
Basingstoke	A1
Bath	A
Batley	A
Baxterley	A1
Beaconsfield & District	A1
Beamish	A
Bearl	A
Bearpark	A
Beccles	A2
Bedale R.D.	A
Bedford	A
Bedlington	A
Bedwas	A
Beeston & Stapleford U.D.	A
Belper U.D.	A
Belton	A
Berkhamsted	A
Berrington	A1
Berwick District	A
Beverley	A
Bexhill-on-Sea	A2
Biggleswade	A2
Billericay	A
Billing	A
Billingham U.D.	A
Bilsthorpe	A
Birchington	A2
Birkenhead	*
Birmingham C.B.	†A
Bishop Auckland	A
Bishop's Stortford	A
Bispham	A
Blackburn	A
Blackpool	A
Blackwell R.D.	A
Blaydon U.D.	A
Blidworth	A
Blyth	A
Bognor Regis	A2
Boldon U.D.	A
Boisover U.D.	A
Bolton	A
Bourne End	A1
Bournemouth District	A
Bracknell	A2
Bradford	A
Bradford-on-Avon	A2
Braintree	A1
Breconshire, County of...	‡A2
Brent Knoll	A2
Brentwood	A
Bridlington	A
Brierfield	A
Brighouse	A
Brighton	A
Bristol	A
Broadstairs	A2
Bromsgrove U.D.	A
Brough	A
Broughton (Cheshire)	A
Buckley	A
Bungay	A2
Burnham-on-Crouch	A2
Burnley	A
Burton-on-Trent C.B.	A
Bury	A
Bury St. Edmunds	A1
Buxton	A
Byfleet	A1
Calder Valley	A
Cambridge	A
Cannock U.D.	A
Canterbury	A2
Cardiff	A
Cardiganshire, County of	‡A2
Carlisle	A
Carmarthenshire, Cnty of	‡A2
Caernarvonshire, Cnty. of	‡A2
Carnforth	A
Castleford	A
Caterham	A
Chapel-en-le-Frith	A
Charmy Down	A
Chatham & District	A1
Cheadle (Staffs) R.D.	A
Chelmsford	A
Cheltenham	A
Chepstow	A1
Chertsey	A
Chester	A
Chesterfield M.B.	A
Chesterfield R.D.	A
Chester-le-Street U.D.	A
Chichester	A2
Chippenham (inc. Chippenham Within and Hardenhuish)	A2
Chorley	A
Clacton	A1
Cleethorpes	A
Clevedon	A1
Cleveleys	A
Clitheroe	A
Coalville U.D.	A
Cobham (Surrey)	A
Colchester	A
Colne	A
Colwyn Bay	A1
Congleton	A1
Consett	A
Conway	A1
Cornwall, County of	‡A2
Coventry C.B.	A
Cranbrook	A2
Cranleigh	A2
Crawley (Sussex)	A1
Crewe	A
Cromer	A1
Crowborough	A2
Cuckfield	A2
Dalton-in-Furness	A
Darlington District	A
Darwen	A
Deal	A2
Denbigh Town	A2
Derby C.B.	A
Devizes	A2
Devon, County of	‡A2
Dewsbury	A
Didcot	A2
Diss	A2
Doncaster C.B.	A
Dorking	A
Dorset, County of (excepting Poole, Swanage and Wimborne A1)	A2
Dover	A2
Dovercourt	A
Driffield U.D.	A1
Droitwich M.B.	A
Dudley M.B.	A
Dunstable	A
Durham City	A
Eastbourne	A
E. Glam. & Mon. Val.	A
East Grinstead District	A2
Eastwood (Notts.) U.D.	A
Ebbw Vale & District	A
Edenbridge	A2
Ely	A2
Epping	A
Exeter	A
Fakenham	A2
Falmouth	A2
Fareham	A2
Faversham	A2
Felixstowe	A1
Filey U.D.	A
Fleetwood	A
Flint	A
Folkestone	A2
Frinton	A1
Frome	A1
Gainsborough U.D.	A
Gateshead	A
Gillingham (Kent)	A1
Glossop	A
Gloucester	A
Gloucestershire, Cnty. of	‡A2
Godalming	A2
Goole M.B.	A
Gosport	A
Grantham M.B.	A
Gravesend	A
Great Yarmouth	A
Grimsby C.B. & R.D. (part)	A
Grimsby R.D. (remainder)	A2
Guildford District	A2
Guilsborough	A1
Guiseley	A
Halesowen M.B.	A
Halifax	A
Halstead	A2
Haresfield	A1
Harlow	A
Harpenden	A
Harrogate	A
Hartlepool	A
Harwich	A
Haslemere	A2
Hastings	A2
Hatfield (Herts.)	A
Haywards Heath	A2
Hemel Hempstead	A
Henley-on-Thames	A2
Hereford	A2
Herefordshire, Cnty. of	‡A2
Herne Bay	A2
Hertford	A
Hexham U.D.	A
Heysham	A
High Wycombe	A1
Highworth	A2
Hinckley U.D.	A
Hitchin	A
Hoddesdon	A
Horley	A2
Horsham	A2
Horwich	A
Huddersfield	A
Hull	A
Hunstanton	A2
Huntingdon (Staffs)	A
Ilkley	A
Ingatestone	A1
Ipswich	A
Isle of Sheppey	A2
Isle of Thanet	A2
Isle of Wight	A2
Jarrow M.B.	A
Keighley	A
Kendal	A
Kenilworth U.D.	A
Kettering M.B.	A
Keynsham	A
Kidderminster M.B.	A
King's Lynn	A1
Kingskerswell	A1
Kingsteignton	A1
Kirkham	A
Knaresborough U.D.	A
Knowle	A1
Lancaster	A
Leamington M. B.	A
Leatherhead	A
Leeds	A
Leicester C.B.	A
Leighton Buzzard	A1
Letchworth	A1
Lewes	A2
Lichfield M.B.	A
Lincoln C.B.	A
Littlehampton	A2
Liverpool	*
Llandudno	A1
Llanelly	A
London	*
Long Eaton	A
Loughborough M.B.	A
Louth M.B.	A2
Lowestoft	A
Loxton	A2
Luton	A
Lyneham (Devon)	A2
Macclesfield	A
Maidenhead	A1
Maidstone	A1
Maltby	A
Maldon (Essex)	A1
Malvern U.D.	A1
Manchester	A
Manningtree	A1
Mansfield M.B.	A
March	A
Margate	A2
Market Harborough U.D.	A
Maryport	A
Matlock U.D.	A1
Melksham	A2
Melton Constable	A2
Melton Mowbray U.D.	A1
Merthyr	A
Middlesbrough	A
Middleton	A
Middlewich	A
Milford Haven	A1
Morecambe	A
Morley	A
Mundesley	A2
Nantwich	A
Nelson	A
Newark-on-Trent R.D.	A1
Newbury	A2
Newcastle-on-Tyne	A
Newcastle-under-Lyme	A
New Forest District	A1
Newmarket	A1
Newport, Mon.	A
Newport Pagnell	A2
Newton Abbot	A1
Northallerton Dist.	A
Northampton C.B.	A
North Shields	A
Norton Radstock	A1
Norwich	A
Nottingham C.B.	A
Nuneaton M.B.	A
Oakham U.D.	A2
Oldham	A
Ongar	A
Ormskirk	A
Ossett and Horbury	A
Oxford	A
Oxted	A1
Paignton	A1
Peterborough	A
„ Soke	A1
Pickering	A3
Plymouth	A
Pontefract	A
Pontypridd District	A
Portishead	A
Portland Stoneyards	A
Portsmouth	A
Port Talbot	A
Preston	A
Pudsey	A
Pulborough	A2
Radnorshire, County of	‡A2
Ramsgate	A2
Rayleigh	A
Reading	A
Redcar B.	A
Redditch U.D.	A
Redhill and Reigate	A
Ripon	A3
Rochdale	A
Rochester	A1
Rotherham	A
Rugby M.B.	A
Saffron Walden	A2
St. Albans	A
St. Helens	A
St. Neots	A2
Salisbury City	A2
Salisbury Plain	A2
Sawbridgeworth	A
Saxmundham	A2
Scarborough	A
Scunthorpe	A
Selby	A
Sevenoaks	A1
Sheerness	A2
Sheffield	A
Shipley	A
Shoeburyness	A
Shoreham	A
Shrewsbury M.B.	A
Sittingbourne	A2
Skegness U.D.	A1
Skipton U.D.	A
Sleaford U.D.	A2
Slough	A
Smethwick C.B.	†A
Snettisham	A2
Somerset, County of	‡A2
Southampton	A
Southend-on-Sea Dist.	A
Southport	A
South Shields C.B.	A
Spalding U.D.	A2
Stafford M.B.	A
Staines	A
Stamford M.B.	A1
Stantonwick	A
Stevenage	A
Stockport	A
Stockton R.D.	A
Stockton-on-Tees	A
Stoke-on-Trent C.B.	A
Stoke Orchard	A1
Stourbridge M.B.	A
Stourport U.D.	A
Stowmarket	A1
Stratford-on-Avon M.B.	A
Sunderland District	A
Sunningdale	A1
Sutton Coldfield M.B.	A
Swaffham	A2
Swanage	A1
Swansea	A
Swindon	A
Swinton U.D.	A
Tamworth M.B.	A
Tenterden	A2
Tewkesbury	A1
Thames Haven	A
Thetford	A2
Thorpe Bay	A
Thurrock U.D.C. Area	A
„ North of, to Billericay	A
Tilbury	A
Todmorden	A
Tonbridge	A1
Torquay	A1
Totnes	A1
Trowbridge	A2
Tunbridge Wells	A1
Tynemouth C.B.	A
Uppingham (Salop)	A1
Uttoxeter U.D.	A2
Wakefield	A
Wallsend B.	A
Walsall C.B.	A
Walsden	A
Walton-on-Naze	A1
Ware	A
Warminster	A2
Warrington	A
Warwick M.B.	A
Wellington U.D.	A
Wells (Norfolk)	A2
Welwyn	A
Welwyn Gar. City	A
West Bromwich C.B.	A
Westbury	A2
Westcliff-on-Sea	A
Westerham	A1
Weston-super-Mare	A1
Weybridge	A
Weymouth	A1
Whitby U.D.	A1
Whitstable and District	A2
Wickford	A
Widnes	A
Wigan	A
Wigton	A2
Willington	A
Wilmslow	A
Wilts. County of	‡A2
Winchester	A1
Windermere	A2
Windsor and Eton	A
Wisbech	A2
Witham	A1
Woking (District)	A1
Wokingham	A2
Wolverhampton C.B.	A
Woodbridge	A2
Worcester C.B.	A
Workington	A
Worksop M.B.	A
Worthing	A2
Wrexham (incl. Cefn)	A
Wroughton	A1
Wylam	A
Wymondham	A2
York	A

*For Birkenhead, Liverpool and London the rates are:—Craftsmen, 3s. 10½d.; Labourers, 3s. 5d. In the case of London the rate beyond the 12-mile radius is:—Craftsmen, 3s. 10d.; Labourers, 3s. 4½d. † Plus 2d. per working day. ‡ This is the County rate and applies except where higher grades are stated.

NOTE.—Carpenters and Joiners providing own tools when employed in establishments operating under the Supplementary Rules for Woodworking Factories and Shops, receive 2d. per day; when employed on other building industry work, 4d. per day.

WOMEN'S RATES.—In all districts throughout the country the rate of wages for women engaged in craft processes is 2s. 8d. per hour. Women introduced to carry out work other than craft processes, 2s. 4d. per hour.

For Building Trade Wages in Scotland see page 346

RHODES

PULLEYS AND SASH CHAIN

THE FIRST COST IS THE LAST COST!

So specify 'RHODES' and Satisfy Clients.

Write for booklet from . . . RHODES CHAINS LTD.
BEACON HOUSE • KINGSWAY • LONDON • W.C.2

The only PERMANENT system of sash hanging.

- ELIMINATE future maintenance costs.
- PREVENT damage to wood and paint work.
- AVOID risk of personal injury through breaking sash cords.

The Perfect Combination . . .

The best is often achieved only by a combination of two things. Such is the case with NACOFELT roofing where good material and skilled laying go hand in hand . . . where every curve, every angle and every detail is built-up as one unbroken surface by Neuchatel craftsmen.
The proof of this perfect combination is to be seen on buildings all over the country.

FOR FELT ROOFING—SPECIFY

NACOFELT CRAFTSMAN LAID BY NEUCHATEL

SPECIALISTS FOR 80 YEARS IN ASPHALTE
for Tanking, Flooring, Roofing and Roads and Approved Laying Contractors for Accotile Flooring.

THE NEUCHATEL ASPHALTE COMPANY LTD

58 VICTORIA STREET, LONDON, S.W.I. *TELEPHONE NO. OF CONTRACTING DEPARTMENTS: RENown 1321*
Branches: BELFAST • BIRMINGHAM • CARDIFF • EDINBURGH • FROME • GLASGOW • LEEDS
MANCHESTER • NEWCASTLE • OFFHAM (KENT) • PLYMOUTH • PORTSMOUTH

NEUCHATEL

Duresco Products

DURESCO PRODUCTS LTD., CHARLTON, LONDON, S.E.7
Telephone: GREenwich 0034

Happy Landings . . . !

Some walls—like some people—invite rough treatment by virtue of their position. Some, likewise, get plastered and some do not. . . .
We have in mind particularly those landing, stairway and passage walls in schools, cinemas, flat and office blocks—which can look like 'the ruins that Cromwell knocked about a bit' within weeks of opening day.
For such walls we have developed TEXIDEC, for producing attractive relief or textured finishes that will stand up to even the roughest juvenile traffic. And where plastering is eliminated and a finish is required for wood-float rendering, TEXIDEC practically specifies itself.

We will gladly send you samples of the many decorative effects which TEXIDEC can give—used alone or in combination with others of the wide Duresco range.

HOPE'S

HOT-DIP GALVANIZED

WINDOWS

WITH THE FRICTION HINGE

NOTHING TO WEAR OUT

NOTHING TO GO WRONG

NO STAY TO CLUTTER THE CILL

LESS MAINTENANCE

SINGLE-HANDED OPERATION

OF LASTING QUALITY

SEND FOR STANDARD WINDOW CATALOGUE NO. 284

HENRY HOPE & SONS LTD
SMETHWICK, BIRMINGHAM
& 17 BERNERS ST., LONDON, W.1

NEWS IN BRIEF

AMERICAN FOUNDATION AWARD

The J. C. Nichols Foundation of the Urban Land Institute, USA, offers a grant-in-aid to the amount of 2,000 dollars to be awarded during the Spring of 1955, for research to be carried on during the academic year 1955-56 at Georgia Institute of Technology. The competition is open to any man or woman who has been admitted to the graduate division of Georgia Institute of Technology for study during the academic year 1955-56 in architecture, city planning, civil engineering, or industrial management. A faculty committee will nominate candidates for the award based upon the submission of an outline of research aimed at producing a better understanding of the problems of urban growth and development. Applications should be made to the J. C. Nichols Memorial Award Committee of Georgia Institute of Technology, Howard K. Menhinick, chairman, 225 North-avenue, NW, Atlanta, Georgia, not later than March 15, 1955.

VAUXHALL MOTORS EXPANSION

A preliminary informal discussion is to be held at the invitation of the Ministry of Housing and Local Government into the application by Vauxhall Motors, Ltd., for planning permission to extend their Luton Works for increased motor vehicle production. An industrial development certificate has been given for the expansion, but the question of planning permission remains to be resolved.

RESEARCH AWARDS

Applications are now being invited for the 1955 Leverhulme research fellowships and grants. These awards are intended for senior workers of established position and are limited to British-born subjects normally resident in the United Kingdom; in exceptional circumstances the trustees may waive the condition as to residence. Preference is given to subjects in which existing provision for research is inadequate. The duration of the awards does not normally extend over more than two years or less than three months and the amount depends on the nature of the research and the circumstances of the applicant. Forms of application may be obtained from the Secretary, Miss M. Branney, Leverhulme Research Awards, St. Bridget's House, Bridewell-place, EC4. Applications must be received on or before December 31. Results will be announced in May and the awards will date from September 1, 1955.

FIRST SMOKELESS ZONE

Woolwich Council have decided that London's first smokeless zone should be set up in the St. Mary's redevelopment area of the borough.

NEW YORK CHURCH WINDOW

A London glassworks has completed a stained-glass window for St. Thomas's Church in Fifth-avenue, New York. The window includes five 20 ft. high lights set off by 43 pieces of tracery, and will be shipped in 11 crates at the end of November from the Whitefriars Studios of James Powell and Sons, Ltd., Tudor-road, Wealdstone, where the thousands of pieces of glass that make up the fabric of the window are at present being assembled for inspection. The figures shown in the window include St. Thomas Aquinas, St. Clare, Abraham and Elijah being fed by the ravens.

THE LATE LORD COURTAULD-THOMSON

The death occurred on November 1 of Lord Courtauld-Thomson, KBE, CB, at King Edward VII Sanatorium, Midhurst, Sussex, at the age of 89. Lord Courtauld-Thomson was elected to the board of the Limmer and Trinidad Lake Asphalt Co., Ltd., in 1905 and appointed chairman in 1923, which position he held at the time of his death.

FULLERS' EARTH EXTRACTION

In our report on fullers' earth extraction at Nutfield and Reigate which appeared in our issue of October 22 (page 669), it was stated that the Minister of Housing and Local Government had decided to allow Fullers' Earth Union, Ltd., to extract fullers' earth by open-cast and underground mining methods from further areas of land in Nutfield and Reigate, and that his decision resulted from the refusal of the local planning authority to grant such permission. We are now informed that there was, in fact, no application to, or refusal by, the local planning authority, the position being that the company made an application direct to the Minister and received his permission, subject to the conditions as stated.

IDEAL HOME EXHIBITION

The Daily Mail Ideal Home Exhibition of 1955 will be held at Olympia from March 1 to 26.

BUILDING COURSE

Nottingham and District Technical College has established a course for the higher national diploma in building. The course will begin in 1955. It has previously been necessary for students desiring to take the course to go to Manchester University.

CURRENT LEGISLATION

A book on the Housing Repairs and Rents Act, 1954, by Robert Steel, BSc, and a book on the Landlord and Tenant Act, 1954, by J. A. R. Finlay, MA, published by the Royal Institution of Chartered Surveyors, are now available to non-members. Copies, price 7s. each, from the Secretary, RICS, 12 Great George-street, SW1.

PREVENTION OF ACCIDENTS

Accident prevention groups to deal specifically with the safety problems of the building and contracting industries are increasingly being formed. In addition to the London and Edinburgh groups, which are already established, and following upon the formation of a building contractors' section of the Birmingham and District Industrial Safety Group, a group has now been formed in Liverpool. The Tees-side industrial accident prevention group is arranging to devote one meeting per quarter to the requirements of their members in the building trades.

PAINT MANUFACTURERS' MEETING

At the tenth annual general meeting of the Society of British Paint Manufacturers, Ltd., held at the Dorchester Hotel, London, on November 9, it was announced that Col. F. W. Jones and Mr. C. D. O'Sullivan had been reappointed president and vice-president respectively for the year 1954-55. The five vacancies on the Council were filled by the election of the following: Messrs. T. S. Dally (Pinchin, Johnson and Associates, Ltd.); J. P. Halpin (Lewis Berger (Gt. Britain), Ltd.); C. A. F. Hastilow (Docker Bros.); H. Leigh (W. and J. Leigh, Ltd.); and C. R. Petrie (International Paints, Ltd.).

STEEL ERECTORS' STRIKE

Steel erectors working at the Connah's Quay and Shotton Steelworks, near Flint, started a strike on Monday, according to the Constructional Engineering Union. Eighty-five men stopped work, and, with the steel erectors already on strike in London, it was reported that this brought the total idle to nearly 200. The dispute is between the Engineering and Allied Employers' National Federation over the rejection of a claim for a wages increase.

MOTION ON TENDERING

Liverpool Corporation Finance Committee has been asked for a report on a motion dealing with tenders submitted for Corporation work, goods or services. The motion urges that any such tenderer shall give a declaration that he will not be a party to any scheme or arrangement under which (1) the amount of his tender is communicated to any body or person before it is considered by the Corporation Committee; (2) any other tenderer for the same work is reimbursed any part of his tendering costs; and (3) his tender prices are adjusted by reference, directly or indirectly, to the prices of any other tenderer for the same work.

GUILDHALL: A CORRECTION

We regret that a mistake in some particulars of the restoration of Guildhall, supplied by the City Corporation, was repeated in *The Builder* for November 5, in which the work was illustrated. The consulting engineer was Mr. Burnard Geen, MInst.CE.

LMBA SOUTH-EASTERN AREA

Prizegiving Ceremony

MR. E. T. ASHLEY SMITH, FRIBA, County Architect to the Kent County Council, presented prizes to 24 building apprentices taking building courses at local technical colleges at a ceremony arranged under the prize scheme of the South-eastern Area of the LMBA and held at the "Black Prince," Bexley, on November 16. Mr. E. Smith, AIOB, chairman of the Area, presided.

MR. ASHLEY SMITH said that it was very difficult to decide what was good architecture but he had himself found the words of the Elizabethan poet Sir Henry Wooton to be very helpful—"Well building hath three conditions, firmness, commodity and delight." The first condition meant that everything should be carried out correctly and well; the second meant fitness for purpose, the right materials for the job; the third that a good building should give us pleasure.

Mr. Ashley Smith continued, "You must find joy in your work, and in giving of your best for yourselves and your employers." He also offered the apprentices a word of warning. "Remember that your time is not your own. We are working in five dimensions to-day; as well as the normal three there is also time and cost. Remember that you are serving the public as well as your employers."

MR. KEITH COLEBORN, FRSA, ARCA, Principal of Bromley College of Art, spoke on behalf of the technical colleges and said that the building apprentice of to-day was no longer a lonely individual but had the backing of the entire building industry. He thanked the employers, and in particular the LMBA, for their "sympathetic and informed co-operation."

TRADE NEWS

TECHNICAL GUIDE BOOKLET

A guide to the use of "Asbestolux" panels and units in curtain wall construction has been produced by the Board Division of the Cape Asbestos Co., Ltd., 114-116, Park-street, W1. The results of tests and research on fire protection, applied finishes and allied subjects are also available from the company.

HEAVY-DUTY SHOVELS

Two new heavy-duty hydraulic loading shovels are being shown for the first time by Chaseside Engineering Co., Ltd., Hertford, Herts, at the Public Works Exhibition. The new "Loadmaster 500" is a rear wheel driven machine powered by Perkins 62 bhp diesel engine or Fordson 44 bhp diesel engine, and alternative petrol or paraffin engines are available. The new loader, it is claimed, can maintain from 80 to 140 loading cycles per hour for long periods. There is a range of interchangeable scoops from ¾ cu. yd. to 2 cu. yd. capacity, which can be fitted with detachable manganese steel teeth. The new "Loadmaster 600" is a front wheel drive machine, similar in construction to the "Loadmaster 500." Either machine can dig below ground level, and instantaneous or controlled discharge is possible at all scoop heights.

HYDRAULIC LOADING SHOVEL

In addition to their 2H type ¾, 1 or 1½ cu. yd. hydraulic loading shovel, F. E. Weatherill, Ltd., Union-row, N17, are exhibiting the recently introduced hydraulic "Overloader" with ¾ cu. yd. capacity scoop on their stand at the Public Works Exhibition. This machine has already been put into successful operation by a number of local authority and industrial users at home and abroad, and is understood to offer a high rate of loading coupled with a greatly reduced manœuvring time, being particularly suitable for operating in restricted space.

HEAVY-DUTY FLOORING

Over 130,000 sq. ft. of "Weyroc," manufactured by the Airscrew Company and Jicwood, Ltd., at Weybridge, Surrey, have been fitted as flooring at the Hops Marketing Board's new warehouse at Paddock Wood, opened on November 10.

EARTH-MOVING EQUIPMENT

A new piece of earth-moving equipment, claimed to be the first complete, self-contained, wheeled hydraulic excavator, is being exhibited at the current Public Works Exhibition at Olympia. It is the "Tracta Digga," made by Mathew Brothers, Sandy-lane North, Wallington, Surrey, and designed to bring to smaller jobs of excavation the advantages of larger equipment at comparatively low cost. The machine offers three major facilities: trench digging down to 12 ft.; forward shovelling up to 17 ft.; and a slewing crane with 10 cwt. capacity. Several other features include a 70 degrees slew to left and to right, bucket capacity from 2½ to 7½ cu. ft., and a 40-hp Fordson diesel engine.

EXCAVATING MACHINE

The Whitlock "Dinkum Digger," which is being exhibited at the Public Works Exhibition by Ernest Doe and Sons, Ltd., Ulting, Maldon, Essex, is mounted on a Fordson Major diesel tractor and understood to be easily manœuvrable and capable of being worked close to high walls. It has a self-aligning bucket and a maximum speed of 20 mph, and can be used for cleaning out irrigation drains. Operation is entirely by hydraulic control, a two-way ram being used for digging, another for raising and a third for slewing in either direction. A safety relief valve prevents stalling of the tractor's engine, and a linkage device automatically corrects the digging angle at all depths. A crane jib, grapple fork and other attachments are available.

CHANGE OF ADDRESS

The new head office of Tretol, Ltd., is situated at Tretol House, The Hyde, NW9.

The address of James Miller and Partners, Ltd., contractors, is now Silverdale-road, Hayes, Middx. (Tel.: Hayes 3981/5.)

GUILDHALL RESTORATION

We have been informed that much of the English oak used in the reconstruction of the roof and restoration of the Guildhall, described in our issue of November 5, was supplied by the firm of Robert Batcheller and Sons, Ltd., of Bridge Wharf, Maidstone, and came mostly from Kentish estates. We understand also that H. H. Martyn and Co., Ltd., architectural decorators, of Cheltenham, were responsible for a considerable amount of work on the Guildhall, including the screen at the east end and the musicians' gallery.

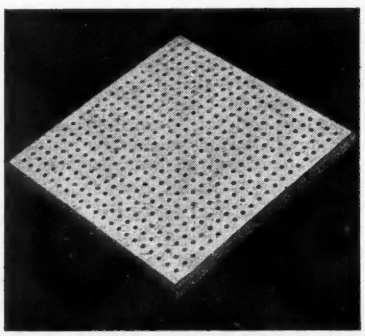
COMPANY MERGER

The South Western Stone Co., Ltd., Thessaly-road, Battersea, SW8, have acquired the cast stone business formerly trading as Emerson and Norris, Ltd., of Great West-road, Brentford, and have transferred the business to their Battersea and Portland works for the production of both cast and natural stone.

PERSONAL COLUMN

Teddington Industrial Equipment, Ltd., have announced the appointment of MR. F. P. O. STRANGE as sales manager, and MR. C. D. WENHAM as contracts manager.

Enfield Cables, Ltd., have announced the following appointments: MR. J. G. JACKSON as manager of the Glasgow branch; MR. F. R. MACKENZIE as manager of the Newcastle branch; MR. W. F. LAWRENCE as manager of the Southampton branch, and MR. H. DENNIS, AMIEE, as manager of the Manchester branch.



OVERSEAS BUILDING

[*From Our Own Correspondents*]

Australia.—A number of hotels in Southern Australia are to be built and others are to be modernised. Work has begun already on the new Albion Hotel, in Kilburn and tenders are to be invited shortly for the new Flinders Hotel, in Rosewater. Estimated cost of these two hotels is about £130,000. The firm of J. Meiers and Co., of Norwood, SA, has been awarded the contract for the erection of the new PMG building in Port Augusta. It will cost £37,000. Mines Department Surveyors of Port Augusta are now testing a site for a power station. Its possible cost is estimated at £20m. It is scheduled to be completed in 1962.

Tenders have been invited for the completion of the new observatory at Adelaide which was started during the war. . . . A modern store building is to be erected in Pall Mall, Bendigo, by Messrs. Myers (Bendigo), Ltd. It will cost £100,000. Contractors are Hansen and Yuncken, Ltd., and the architects are A. S. and R. A. Eggleston, 360 Collins-street, Melbourne. . . . It has recently been announced that an eight-storey building is to be built by Lennons Hotel on their land fronting Adelaide-street, Brisbane. . . . In New South Wales, Schweppes, Ltd., have announced that they are to build a £200,000 block at Alexandria. A new nurses hospital at the Royal Prince Alfred Hospital will cost nearly £1½m., and another £¾m. is to spent on a TB block at the same hospital.

Cuba.—The Bank of Agricultural and Industrial Development in Cuba, assisted by a US engineer seconded to them under the Point IV Programme, is to set up a Mineral Investigations Laboratory. The site of the new building has not yet been finalised. . . . Tenders for the construction of the first large hydro-electric plant in Cuba harnessing the waters of the Hanabanilla will probably be called for about May, 1955, when the final report and specifications are expected to be completed. The construction and operation of the plant will be the responsibility of a new company recently formed, called La Primera Central Hidro-electrica de Cuba (or PRICHEC).

Plans are also being drawn up for the construction of a ship canal, 80 kms. in length, from a point west of Cardenas Bay in the north of Cuba to Cochinos Bay in the south, at an estimated cost of $400m. . . . The canal is to be built by a concessionaire, who will operate it for 99 years. The concessionaire is also to be granted a belt of land 400 metres wide on each side of the canal for the building of factories. . . . A contract for the building of a road tunnel under the Bay of Havana has been awarded to the Raymond Concrete Pile Co. of USA. A number of factories will be built once the tunnel is in operation.

Greece.—A contract between the Public Power Corporation of Greece and the French firms Omnium Lyonnaise and Cotesi for the construction of the Megdova 84,000 kw. hydro-electric power stations was signed recently. The entire project is now expected to cost approximately £4m. and should be in operation by 1959. . . . Agreement with the Turkish Government has been reached for large flood control construction in the Evros Valley. The work will be carried on on the basis of a survey made by the Harza Company.

Ten Greek companies submitted bids for the aqueduct from Lake Yilki to Marathon

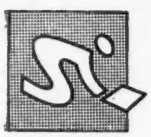
SOLID FACTS about SOLID FLOORS

Marley Tiles on a solid concrete subfloor are warm, attractive and cost far less than any alternative floor and floor covering.

Subfloor draughts and cold air currents are eliminated and absolute freedom from dry rot or woodworm attack is ensured.

SOLID FLOORS COST LESS first, last and all the time

MARLEY



The Marley Tile Co. Ltd., London Road, Riverhead, Sevenoaks, Kent. *Telephone: Sevenoaks 2251*

London Showrooms at Alfred Goslett & Co. Ltd., 127-131 Charing Cross Road, W.C.2. *Telephone: Gerrard 7890*

Who wants to paint this factory?

It's 250' long, 80' wide and 60' high to the eaves. Painting a place of this size is a costly business. Nobody wants to have to paint such a building, but most people have no choice.

The owners have chosen wisely. Roofs and walls are clad with Noral Mansard corrugated sheet, and need no painting now or later. So a substantial saving in maintenance costs will accrue year by year.

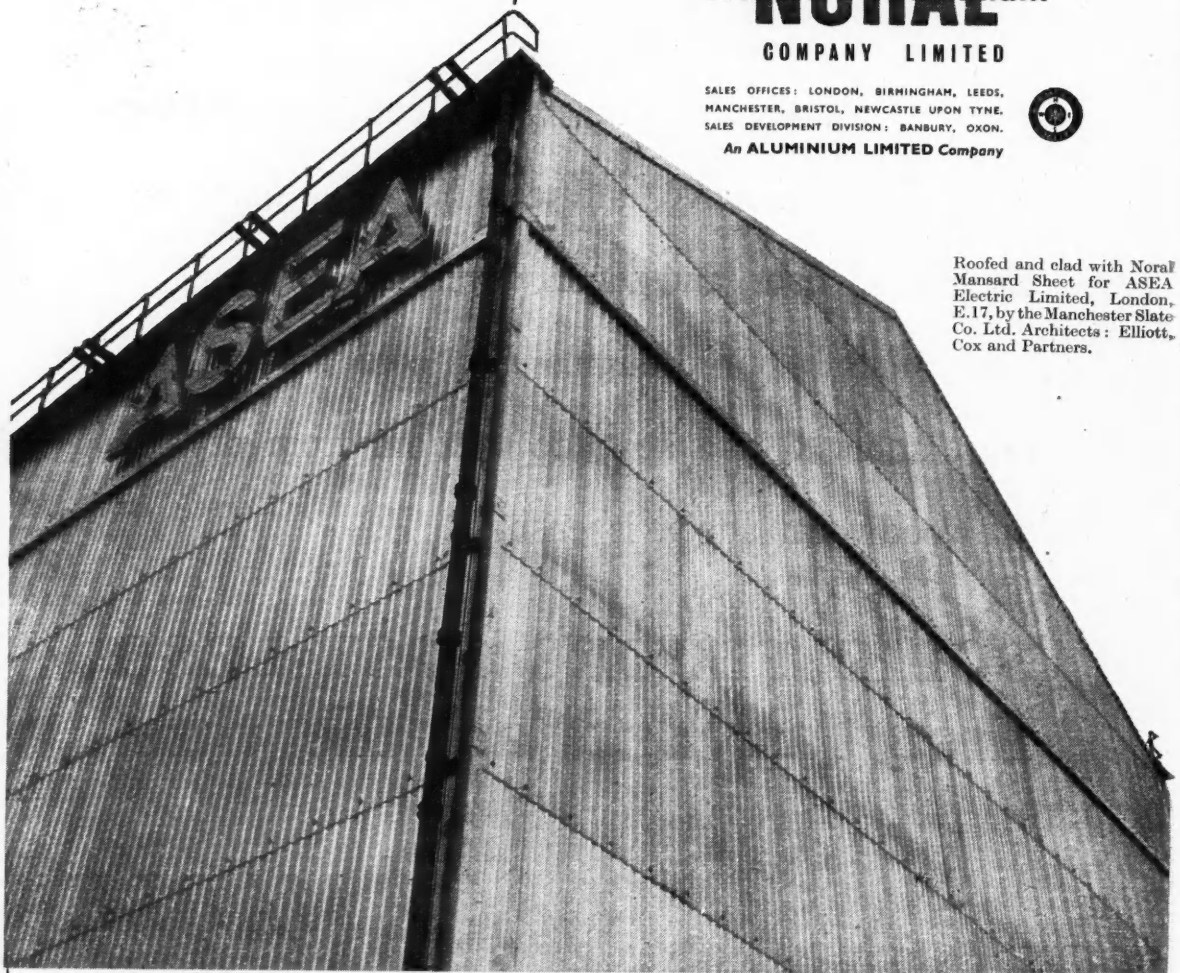
Other types of Noral sheet are also available, including the new 'Industrial' profile which offers special advantages for factory buildings. They are described in our book 'Noral Corrugated Sheets', which we shall be pleased to send you on request.

Northern Aluminium

NORAL

COMPANY LIMITED

SALES OFFICES: LONDON, BIRMINGHAM, LEEDS, MANCHESTER, BRISTOL, NEWCASTLE UPON TYNE.
SALES DEVELOPMENT DIVISION: BANBURY, OXON.
An ALUMINIUM LIMITED Company



Roofed and clad with Noral Mansard Sheet for ASEA Electric Limited, London, E.17, by the Manchester Slate Co. Ltd. Architects: Elliott, Cox and Partners.

ACCREDITED ROOFING AGENTS (Head Offices)

INDUSTRIAL ENGINEERING LTD., MELLIER HOUSE, ALBEMARLE STREET, LONDON, W.I · JOHN BLAND & CO. LTD., EAST MOORS, CARDIFF · THE BODDY ROOFING CO. LTD., 81 ESSEX ROAD, LONDON, N.I · W. H. HEYWOOD & CO. LTD., BAYHALL WORKS, HUDDERSFIELD · MANCHESTER SLATE CO. LTD., LANCASTER ROAD, DIDSBURY, MANCHESTER, 20

Lake, the present Athens reservoir. The winning contract was submitted by the companies ETKA and Greek Technical Works, and was the lowest bid at a price of £345,000. The Greek Government is shortly to call for tenders for the reconstruction of the State shipyards at Scarmanga. . . . A construction project is under consideration for the coastline near Athens between Phaleron to Kavouri to attract tourists. A contract has been drawn up between the Government and the National Bank of Greece and Athens for this project. The scheme includes a 120-bed luxury hotel, various recreation centres, fun fairs and tourist cabins.

India.—The Government of West Bengal is seeking approval of the Government of India for a scheme known as the Durgapur Project for the development of the Durgapur area of West Bengal. This project envisages the establishment of a chemical industry based upon the coal and iron available in the area.

**Jamaica.*—Work has commenced on the construction of the new runway at the Palisadoes Airport, the island's main airport, situated about ten miles from Kingston. This will cost £1½ m., and the dredging and reclamation project, reported to be worth £625,000, was secured by the McWilliams Dredging Co., of New Orleans. . . . The Jamaica Government is stated to be considering plans for the improvement and extension of the port of Kingston. Its cost is estimated at about £8m.

New Zealand.—Construction of a new Government tourist hotel at Franz Josef Glacier will begin within six months. The new hotel will be a three-storey building with rooms for 104 guests. . . . Plans and specifications have been approved for a new railway station at Christchurch, and the Railways Department will call for tenders. . . . The NZ National Roads Board is continually improving the surfaces of major highways, and plans are under consideration for considerably more work.

Portuguese E. Africa.—The Railway Administration in Portuguese East Africa has invited tenders for the construction of nearly 200 small buildings for the four townships resulting from the building at the Limpopo River. They are Magude, Cuija, Mabalane and Pafuri. The cost is estimated at approximately £500,000. . . . Three new townships are also to be created at Gurissa, in the Quelimane district, and at Reteta and Toma, in the Capo del Gado district.

Turkey.—A long-term project has been prepared by the Turkish Government for the construction of a second steel plant at Edremit, on the Ægean coast, based on the large iron-ore deposits in that area. British firms specialising in this type of work can inquire about details from the Embassy in London or from the Development Corporation in Ankara.

Work is to be started at the end of this month on the new port of Alsancak, which is to cost about £5m. The work has been awarded to a French firm the name of which has not yet been announced. British firms interested in port projects should inquire at the aforementioned sources of information. . . . Plans have been drawn up for the construction of a new aerodrome at Van, in Eastern Turkey, at a cost of £500,000.

South Africa.—The Transvaal Provincial Administration has sanctioned £102,000 for the erection of a separate out-patients' department in the grounds of the general hospital. Five acres of land at Auckland Park will be used for a site and grounds for a £100,000 central store which will serve hospitals in the Transvaal. . . . Work on the £2m. double highway from Johannesburg to Pretoria is expected to commence in December. . . . The Groote Schuur Hospital, Capetown, has been allocated £370,000 by the Provincial Administration for additions and improvements during the next few months. . . . The Witwatersrand University, Transvaal, is endeavouring to raise £1m. (of which £505,000 has already been given) towards the construction of new faculty buildings and other extensions.

USA.—A proposed commercial centre is being designed for Boston, Mass., USA, by leading American architects. Its cost is said to be $25m., and it will comprise a municipal department, a motel, a huge hotel, a shopping centre, and parking space for 6,000 cars. The architects who collaborated in designing the centre were Prof. Walter Gropius, Jean Bodman Fletcher, Norman C. Fletcher, John C. Harkness, Sarah Harkness, Robert C. McMillan, Louis A. McMillan and Benjamin Thompson.

INDIAN INDUSTRIES FAIR

*An Indian Industries Fair is to be held in New Delhi from October 29 to December 15, 1955. This international event is being organised by the Federation of Indian Chambers of Commerce and Industry, with the support of the Government of India. It is planned on an extensive scale and the products of many Indian industries will be shown. Foreign manufacturers of capital goods and machinery are invited to take part. The opportunity is an important one in view of India's growing demand for capital equipment.

All applications for space should reach the Secretary of the Exhibition Committee, Federation of Indian Chambers of Commerce and Industry, 28, Ferozshah-road, New Delhi, by May 15, 1955. A copy of the fair regulations is held by the Exhibitions and Fairs Branch of the Board of Trade, and may be inspected in Room 720, Lacon House, Theobalds-road, London, WC1. The Exhibitions and Fairs Branch (telephone Chancery 4411, ext. 436) will be pleased to answer inquiries about this fair. Reference CRE/E and F/228/54 should be quoted.

CANADIAN INTERNATIONAL FAIR

The eighth Canadian International Trade Fair will be held in Toronto from May 30 to June 10, 1955.

Continuing its policy of developing new trade sections, the 1955 Canadian Fair will include a comprehensive welding and metals equipment and materials section for the first time. Another section that shows promise of developing beyond the scope of previous years is that containing heavy industrial electrical equipment. The largest single trade category so far is machine tools, followed closely by plant equipment. Good representation is also contained in sections devoted to materials-handling equipment and construction and power equipment.

At the end of September more than 33,000 sq. ft. of space had been booked by exhibitors from eight countries. Countries booked to date, in order of exhibit space volume, are Canada, the United Kingdom, the United States, Denmark, Ireland, Norway, Germany and Sweden. Further information may be obtained from the Canadian Government Exhibition Commission, Department of Trade and Commerce, Canada House, Trafalgar-square, SW1.

TRADE FAIR, BAGHDAD

Substantial Sales Reported

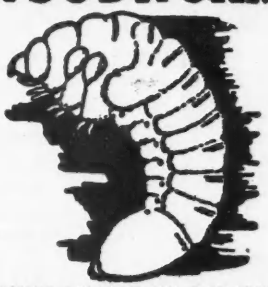
THE results of the British Trade Fair organised by the Federation of British Industries and held in Baghdad from October 25 to November 8 were announced last week. The number of visitors exceeded 330,000 and included trade buyers not only from Iraq, but also from Lebanon, Syria, Jordan, Saudi Arabia, Kuwait, Bahrein and Persia, the Sudan, India and Pakistan. They also included many influential personages from neighbouring countries. The Arab Chambers of Commerce arranged to hold their annual meeting in Baghdad during the fair, and the 300 delegates made a personally-conducted tour.

It was not possible to make an assessment of the volume of business done, since many important contracts remained to be finalised. It is understood, however, that practically no products on show remained unsold, and that particular interest was shown in the prefabricated buildings which housed the exhibits, all of which were sold to Middle East buyers for military use, and for use as schools and government offices.

Substantial sales and numerous inquiries were also reported for the following: contractors' plant, such as excavators, draglines and cranes; heavy electrical equipment, such as generators (which supplied the lighting for the fair); building equipment and prefabricated buildings; air-conditioning plant; irrigation plant; and metal-working and wood-working machines.

The next British trade fair organised by the Federation of British Industries will be held at Copenhagen from September 29 to October 16, 1955.

RENTOKIL
TIMBER FLUID
KILLS
WOODWORM



NO BETTER PRODUCT ON SALE TODAY
Rentokil Timber Fluid kills beetle, egg and grub and successfully prevents all future attack. Use the *proven* insecticide and be free of woodworm. For specialist advice or identification of specimens, call or 'phone
Woodworm and Dry Rot Centre (B),
23, Bedford Square, London, W.C.1.
Telephone: LANgham 5455/6.
RENTOKIL LTD., FETCHAM, LEATHERHEAD, SURREY

* From the Board of Trade Special Register Information Service.

The SCOTTISH BUILDER

Model Building By-laws

OVER a hundred local authorities have now adopted the new model building by-laws which were issued by the Department of Health in January, and which, if adopted generally, would help to reduce costs and speed up building in Scotland. But many authorities have still to reach a decision, and the Department of Health point out that if a builder is operating in several local authorities' areas, and they have not all adopted the new by-laws, he has to struggle with a variety of specifications.

The general adoption of the new by-laws, which were produced by a committee of experts, would overcome these difficulties. They offer freedom in the use of modern building methods and materials, while preserving Scotland's traditionally high standards of construction.

The authorities who have adopted the by-laws include 13 large burghs and 15 counties as well as 74 small burghs. The counties are Aberdeen, Angus, Ayrshire, Berwickshire, Bute, Caithness, Dumfries, East Lothian, Inverness, Kincardine, Kirkcudbright, Midlothian, Moray, Nairn and Roxburgh. The large burghs are Arbroath, Ayr, Coatbridge, Dunfermline, Dumbarton, Dumfries, Greenock, Hamilton, Inverness, Kilmarnock, Paisley, Perth and Port Glasgow.

A substantial number of authorities who have not yet officially notified the Department of Health of their intentions are understood to have made up their minds to adopt the new by-laws. The four large cities are in a special position, as they all have their own local acts for, among other things, regulating building. But, say the Department of Health for Scotland, the cities may find it convenient to use the substance of the new model by-laws when they come to revise the building rules or by-laws made under their local acts.

Glasgow School Jubilee

THE Glasgow School of Architecture, one of the oldest in Britain and one of the first to be recognised by the Royal Institute of British Architects, now celebrates its Jubilee. Formed from the amalgamation 50 years ago of the departments of architecture in the Royal Technical College and the School of Art, the first Professor and Director of Studies was Eugene Bourdon of the Atelier Daumet.

A dinner is to be held in the Trades Hall, Glasgow, on November 26 to celebrate the occasion. Among those to be represented are the Corporation, the University, the Trades House, the Merchants House, the Royal Institute of British Architects, the Royal Incorporation of Architects in Scotland, the Glasgow Institute of Architects, the Royal Scottish Academy and the Scottish Education Department.

Inverness Housing Scheme

THE largest single post-war housing scheme so far undertaken by Inverness Town Council recently received the approval of the local Dean of Guild Court. Including roads and all other services the scheme is estimated to cost over £250,000 and will provide 180 three- or four-apartment flats. The site is the former Springfield nursery and Ballifeary area. The scheme will be completed in two sections, the first being of 56 three-apartment and 28 four-apartment flats, for which the tender submitted by the Weir Housing Corporation, Coatbridge, has been accepted. Work is expected to begin at the end of this month.

New School Features

THE West Lothian County Council Education Committee opened a primary school at Whitburn on November 10, with two features new to Scotland.

For the first time in Scotland external hollow plastic walling has been employed for the main classroom wall faces. The heating system eliminates exposed pipes and radiators in the classrooms. "Holoplast" is used, a 1⅛ in. thick laminated plastic consisting of wood fibres and synthetic resin, having two flat and parallel surfaces homogeneously connected by a series of transverse webs forming rectangular cavities throughout the panel. The voids are filled with glass fibre so that the preassembled panels, fitting into aluminium mullions, have a thermal insulation equal to, or better than, the traditional 11 in. cavity wall.

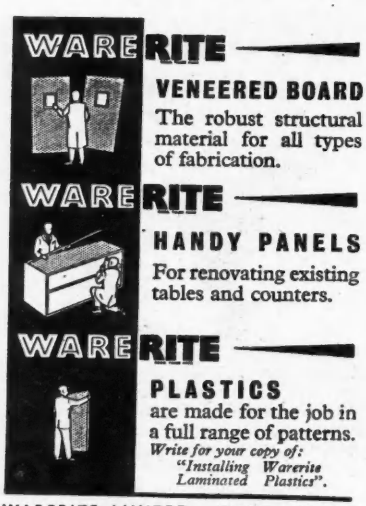
A low cabinet designed in hardwood and plastic, with a stainless steel intake and extract grille, is all that can be seen of the heating installation in the classroom. The installation consists of a low pressure, thermostatically controlled boiler, circulating hot water through small pipes in overhead ducts to battery coils located in each cabinet. The architects were Walter Alison and Hutchison, 38 York-place, Edinburgh.

NEW BUILDINGS

Aberdeen.—Plans prepared by their architects for the N.E. Police Bd. for new police station at Lhanayrd, and new divisional police headquarters at the Bridge of Don, Aberdeen North, have been approved and are to be submitted to the Scottish Board of the Home Office for authority to proceed with erection.

Ayrshire.—Plans prepared for housing scheme of 68 houses to be erected at the Welton housing site at Mauchline. The architect is J. Austen Bent (A), 15, Palmerston-pl., Westend, Edinburgh.

Bairdshill.—The new Church of Scotland hall at Bairdshill, which is to cost £20,503, has been designed by East Kilbride Dev. Corp. architects, who will also supervise the construction.


WARERITE
VENEERED BOARD
The robust structural material for all types of fabrication.
WARERITE
HANDY PANELS
For renovating existing tables and counters.
WARERITE
PLASTICS
are made for the job in a full range of patterns.
Write for your copy of: "Installing Warerite Laminated Plastics".
WARERITE LIMITED · WARE · HERTS
WA.8

SCOTTISH BUILDING TRADE WAGES

FOLLOWING are rates of wages authorised by the Scottish National Joint Council as from May 24, 1954. They apply to the whole of Scotland, including the islands of Orkney, Shetland, etc.

Grade A: Craftsmen, 3s. 9d.; Labourers, 3s. 3½d.

For apprentices, the rates are:

Year.	Percentage of Craftsman's rate.	For week of 44 hours. s.	d.
1st	25	41	3
2nd	33½	55	0
3rd	50	82	6
4th	66½	110	0
5th	75	123	9

For female labour, the rates are:

	s.	d.
Operatives on craft operations (at end of probationary period)	3	3½
Operatives on labouring operations (at end of probationary period)	3	0

Bishopbriggs.—Plans prepared and approved for extensions to the Lanarkshire Works at 140, Kirkintilloch-rd. The architects are staff designers of Messrs. William Fraser & Ptnrs., Ltd., 16, Crewhill-rd., Bishopbriggs.

Clackmannanshire.—Plans prepared by their architects have been approved for new offices, etc., for the NCB at the Whins Alloa district, the Board's principal architect is D. D. Jack (F), 24, Royal-circus, Edinburgh.

East Kilbride.—Plans prepared and approved for East Kilbride Dev. Corp. scheme of 191 houses to be erected at site 1, the Murray housing site No. 5. The architect is Frank Scott (L), Torrence House, East Kilbride.

Dunbartonshire.—Plans prepared for new cleansing department at Dalsetter-ave., Drumchapel. Glasgow Corpn. architects, Civic Dept., Master of Works Dept., Municipal-bldgs., George-sq., Glasgow.

Dundee.—Plans prepared for new Forfarshire scheme of 72 houses to be erected at the Mains of Fintry housing site. The architect is J. Austen Bent (A), 15, Palmerston-pl., Westend, Edinburgh.

Glasgow.—Plans are to be prepared for two ten-storey blocks of houses (containing special features) to be erected at the Toryglen housing dev. site. The architect is J. Austen Bent (A), 15, Palmerston-pl., Westend, Edinburgh.

Glasgow.—Plans prepared for scheme of reconstruction and additions, and garage, to be constructed at Langside-drive. The architect is John S. Wingate (F), 25, Wellington-st., Glasgow.

Glasgow.—Plans prepared and approved for alterations and additions at Anderston, for Messrs. Matthew White & Co., Ltd., 66, Washington-st. The architect is Magnus Duncan (F), 243, Eglinton-st., Eglinton-cross, Glasgow.

Gullane.—Plans have been prepared and approved for scheme of 24 houses Council A is T. J. M. Baldwin (F), County Surveyor's Offices, County-bldgs., Haddington.

Inverness-shire.—CC has a scheme in hand for which plans are to be prepared for an Isle of Skye housing scheme at Kilachin. The architect is Alexander Cullen (F), County Offices, Inverness Castle, Ness-bank, Inverness.

Lanarkshire.—Plans prepared by their own architects have been approved for the new petrol stn. to be constructed at Bonfield for Messrs. Isaac Currie & Sons, Ltd., West Bonfield, Glasgow-rd., East Kilbride.

Lanarkshire.—Plans in hand for scheme of 68 houses which are to be erected at the Burnbank housing site, Hamilton. The architect is J. Austen Bent (A), 15, Palmerston-pl., Westend, Edinburgh.

Lanarkshire.—Plans are in the hands of their architects for an enlargement of the factory block (No. 2) at Blantyre industrial estate by the Scottish Industrial Estates, Ltd., 3, Woodside-cres., Woodlands-rd., Glasgow.

Lanarkshire.—Plans prepared and approved for extension to the Lanarkshire factory at a Strathavon site for Messrs. S. W. Gilmour & Co., Ltd., Commercial-rd., Strathaven. The architect is James Frew, Craigielea, Chapelton.

Macmerry.—East Lothian CC has had plans prepared and approved for scheme of 50 houses to be erected at selected site. The Council A is T. J. H. Baldwin (F), County Surveyor's Offices, County-bldgs., Haddington.

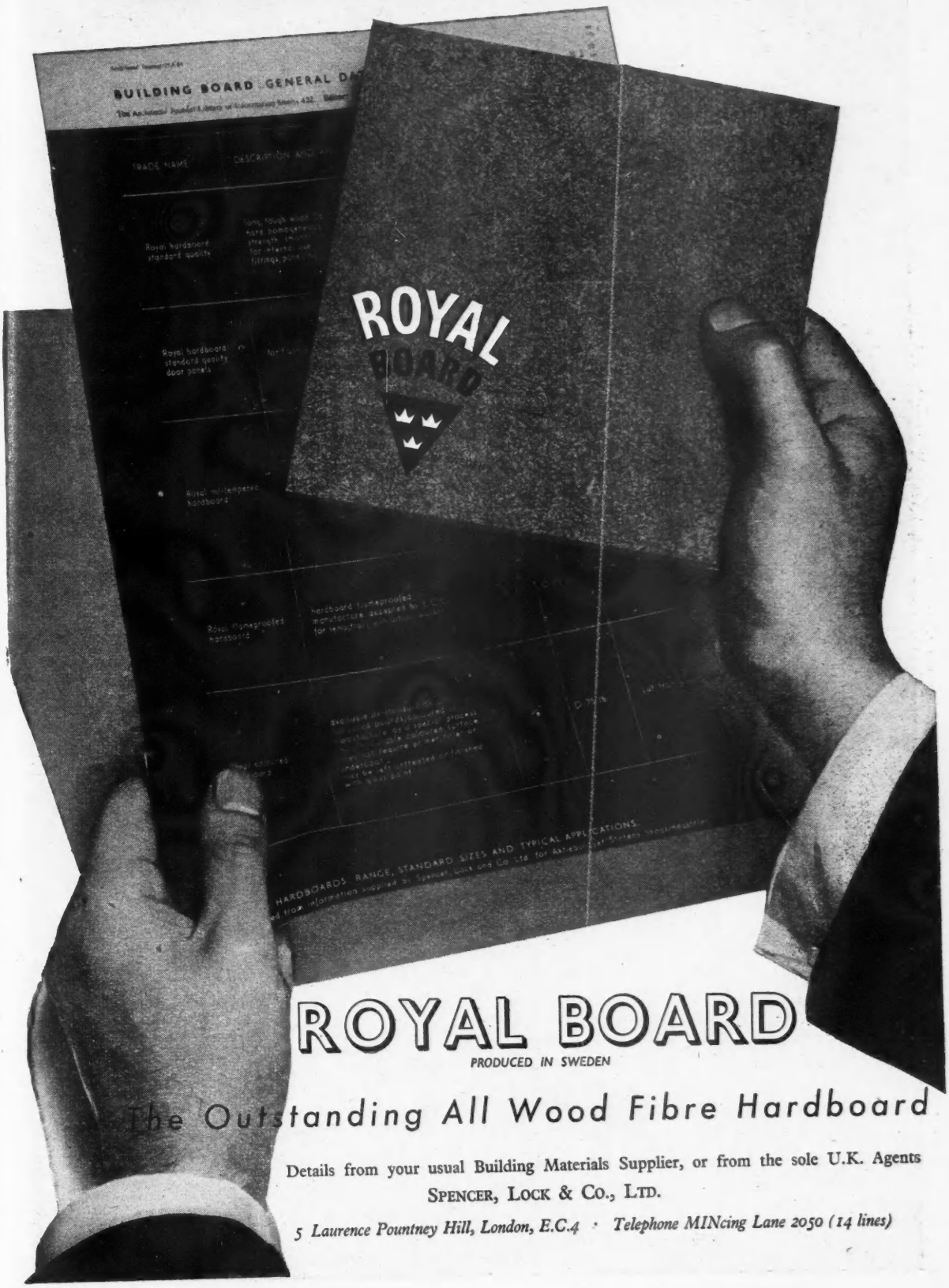
Netherton.—Plans are to be prepared for the second Dev. of the Netherton-rd. housing site (44 houses). The architect is Samuel MacColl (A), County-bldgs., Beckford-st., Hamilton West.

Port Glasgow.—Plans in hand for scheme of 106 houses to be erected at the Renfrewshire Park Farm housing site. The architect is J. Austen Bent (A), 15, Palmerston-pl., Westend, Edinburgh.

Renfrewshire.—Plans in hand for Barrhead Hotel which is to be erected at the Arthurlie-st. Cross. Plans by Mr. E. Gardner, Donnings-brae, Barrhead.

Salsburgh.—Lanarkshire CC has a scheme in hand for the fourth Dev. of the Craighead housing site. The architect is Samuel MacColl (A), County-bldgs., Beckford-st., Hamilton West.

SPECIFY WITH CONFIDENCE



ROYAL BOARD

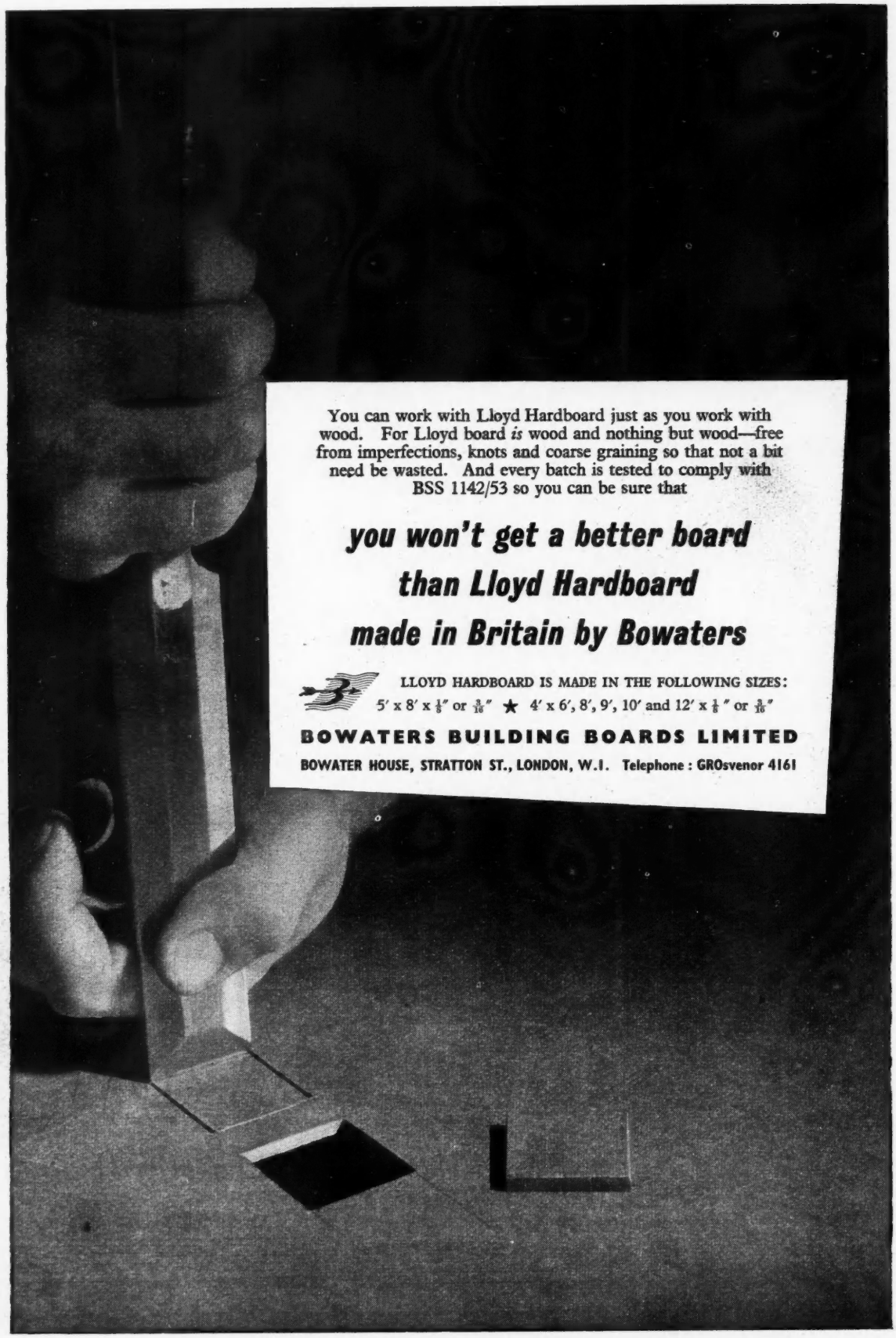
PRODUCED IN SWEDEN

The Outstanding All Wood Fibre Hardboard

Details from your usual Building Materials Supplier, or from the sole U.K. Agents

SPENCER, LOCK & CO., LTD.

5 Laurence Pountney Hill, London, E.C.4 · Telephone MINcing Lane 2050 (14 lines)


You can work with Lloyd Hardboard just as you work with wood. For Lloyd board *is* wood and nothing but wood—free from imperfections, knots and coarse graining so that not a bit need be wasted. And every batch is tested to comply with BSS 1142/53 so you can be sure that
you won't get a better board than Lloyd Hardboard made in Britain by Bowaters
LLOYD HARDBOARD IS MADE IN THE FOLLOWING SIZES:
5′ x 8′ x ⅛″ or 5/16″ ★ 4′ x 6′, 8′, 9′, 10′ and 12′ x ⅛″ or 5/16″
BOWATERS BUILDING BOARDS LIMITED
BOWATER HOUSE, STRATTON ST., LONDON, W.1. Telephone : GROsvenor 4161

The Builder

FUTURE CONSTRUCTION

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

NOVEMBER 23.

*†**Southend-on-Sea CBC.**—Two new school buildings. Boro' A, 30, Alexandra-st.

NOVEMBER 24.

*†**Bristol EC.**—Adaptations, Ashley Down Technical College. W. J. Stenner (F), 29, Berkeley-sq., Bristol, 8. Tenders by December 13.

*†**Bucks CC.**—Child welfare clinic and nurses' home, Marlow. County A, Aylesbury. Dep. £2 2s. Tenders by December 29.

*†**Oxford City C.**—Extensions to old people's home, Barton End House, Headington. City A & Planning Officer.

NOVEMBER 25.

*†**Surrey CC.**—County Sec. Sch. at Sutton Common. County A.

NOVEMBER 27.

*†**Essex CC.**—Erection of Harlow Tye Green and Latton Common C of E junior and infants' school. County A, Chelmsford.

*†**Glenrothes Dev. Corpn.**—14 shops and seven flats and three-storey block with bank and offices and 10 garages, Town Centre. Secretary.

*†**West Ham CBC.**—20 houses, 15 flats and 12 garages, South Molton-rd., E16. Boro' A. & Planning Officer, 70, West Ham-la., E15. Dep. £2 2s.

NOVEMBER 29.

*†**Essex CC.**—Ockendon Culverhouse Sec. Boys' Sch. County A, Chelmsford.

*Finchley BC.—Demolition of 4 houses, North Finchley. Boro' Housing & TP Officer, The Avenue, N3. Dep. £2.

*Leatherhead UDC.—Four garages and 3 storage bays, Bookham-grove, Great Bookham. E&S. Dep. 10s. 6d.

*†**Twickenham BC.**—Service road and 48 flats with 12 garages, Broad-la., Hampton. BE. Dep. £3 3s.

NOVEMBER 30.

*Cambridge City C.—Secondary modern sch. and caretaker's house, Ventress Farm estate. City S. Dep. £5 5s.

*†**Cornwall CC.**—(a) County Sec. Sch. at Wadebridge; (b) Junior Mixed Sch., Carclaze, St. Austell. County A, County Hall, Truro. Dep. £5 5s. each contract. Tenders by January 12.

*†**Northamptonshire CC.**—Building work and heating and electrical installation, infants' school, Exeter estate, Corby. County A, Northampton.

*†**West Sussex CC.**—Canteen, kitchen and dining-room, Steyning Gram. Sch. County A, Chichester.

DECEMBER 1.

*†**Bucks Standing Jt. Com.**—19 police houses. County A, Aylesbury. Dep £2 2s. each contract. Tenders by December 29.

*†**East Suffolk CC.**—Four additional classrooms, Beccles County Mod. Sch. and Bungay Jun. Sch. E. J. Symcox (F), County A, Ipswich.

*†**Norfolk CBC.**—(a) Prefabricated branch library at North Walsham; (b) four classrooms, cloakrooms, etc., at Hethersett Vol. Con. Sch. Chief Edu. Officer.

DECEMBER 3.

*†**Bucks CC.**—Princes Risborough County Secondary School. County A, Aylesbury. Dep. £2 2s. Tenders by January 10.

*Durham CC.—Five police houses and office, Westlea estate, Seaham. County A.

*†**Portsmouth City C.**—Alterations and additions wards G 1 and G 2, St. Mary's House. City A, 1. Western-par. Dep. £1.

*†**West Sussex CC.**—Primary school, Southgate, Crawley. County A, Chichester.

DECEMBER 4.

*†**Dagenham BC.**—Approved list of firms for building repairs, etc. BE&S.

*East Grinstead UDC.—Demolition and site clearance, Charlwood's-row. B. J. Cornelius, S.

*†**Folkestone BC.**—37 houses, Wood-ave. BE. Dep. £3 3s.

*Luton BC.—Kitchen and dining-hall for Maidenhead-rd. Sch. BE. Dep. £2 2s.

*Thurrock UDC.—Conversion of shop, 85, Riverview, Chadwell St. Mary, into branch library. C. S. H. Hawkes, E&S.

DECEMBER 5.

Runcorn RDC.—Six houses with sewage disposal works, lay-by and boundary fencing at Crowley Antrobus. E&S. Dep. £2 2s.

DECEMBER 6.

*†**Bucks CC.**—Slough fire station. County A, Aylesbury. Dep. £2 2s. Tenders by January 10.

*Malvern UDC.—15 bungalows at Worcester-rd. S&WE. Dep. £2 2s.

DECEMBER 7.

Colchester BC.—Three blocks each of 12 flats for TC. BE. Dep. £2 2s.

*Leyton BC.—Six garages and road, Harvey-rd., Leytonstone, E11. BE&S. Dep. £2 2s.

*Luton BC.—Four brick garages and extension of wooden garage. BE. Dep. £2 2s.

DECEMBER 8.

*†**Bucks CC.**—Wexham Court old people's home, Slough. County A, Aylesbury. Dep. £2 2s. Tenders by January 10.

DECEMBER 9.

*Uxbridge UDC.—Civil defence training premises, Belmont-rd. E&S. Dep. £2.

DECEMBER 10.

*Frinton and Walton UDC.—Reconstruction and enlargement of Albion conveniences, Princes Esplanade, Walton-on-the-Naze. Clerk of the Council. Dep. £3 3s.

*Wigan CBC.—Shops to the Market-st. frontage of the Market Hall (stage 1). BE. Dep. £2 2s.

DECEMBER 11.

*Dearne UDC.—Six aged persons' bungalows off Market-st., Goldthorpe. E&S. Dep. £2 2s.

*Swanage UDC.—36 houses, Priests-rd. housing scheme. P. S. Browne, FRICS, Town Hall, Swanage. Dep. £2 2s.

DECEMBER 13.

*Bletchley UDC.—Factory No. 7, Industrial Estate, Watling-st. E&S. Dep. £5 5s.

*†**Bucks CC.**—Bletchley Grammar School for 360 children. County A, Aylesbury. Dep. £2 2s. Tenders by January 17.

*†**Bucks CC.**—Extensions to Sir William Borlose's School at Marlow. County A, Aylesbury. Dep. £2 2s. Tenders by January 17.

*Epsom and Ewell BC.—Brick pavilion on Court recreation ground, Epsom. BE&S. Dep. £2 2s.

*Southport CBC.—Public convenience in Preston New-rd., Crossers. Boro' A. Dep. £1 1s.

DECEMBER 14.

*Taunton BC.—Pavilion, Taunton-green, Cheddon-rd. BE&S.

DECEMBER 15.

*Cardiganshire CC.—Conversion of Avondale Hotel, Aberystwyth, into a home for the aged. County A, Aberayron. Dep. £2 2s.

DECEMBER 16.

*†**Bucks CC.**—Aylesbury ambulance station. County A, Aylesbury. Dep. £2 2s. Tenders by January 17.

*Croydon CBC.—Detached house in Waddon-way. BE&S.

*Tonbridge UDC.—24 houses, Higham Wood estate. E&S. Dep. £3 3s.

DECEMBER 20.

*Acton BC.—Eight garages, Creffield-rd., W3. BE.

*Cuckfield RDC.—14 dwellings, Horsted Keynes. E&S. Dep. £2 2s.

DECEMBER 21.

*†**Bucks CC.**—Slough Civil Defence sub-divisional control centre. County A, Aylesbury. Dep. £2 2s. Tenders by January 10.

DECEMBER 22.

*†**Bucks CC.**—High Wycombe day special school. County A, Aylesbury. Dep. £2 2s. Tenders by January 19.

DECEMBER 27.

*†**Bucks CC.**—Slough Magistrates' and County Courts. County A, Aylesbury. Dep. £2 2s. Tenders by January 24.

JANUARY 18.

*Lindsey CC.—First phase of Barton-on-Humber Bilateral Sch. A. Ronald Clark (A), County A., Newland, Lincoln.

FEBRUARY 14.

Wexford (Ireland) CC.—R.c. bridge over the River Slaney. W. J. L. O'Connell, ME, FRICS, 9, South Mall, Cork. Dep. £50.

NO DATE.

*Croydon CBC.—96 garages at New Addington. BE.

A Permanent Cure for SMOKY CHIMNEYS

The 'Ventamatt' prevents down-draught and increases up-draught, irrespective of wind direction. There are no moving parts, no small holes to get choked and the design is of the straight through type to facilitate sweeping. Specified and used by Public Authorities, Architects, Builders and Property Owners everywhere.

Pat. Nos. 424983, 476855.

VENTAMATT

Down-Draught Preventing CHIMNEY POT

Sole Manufacturers:

AVIS ENGINEERING CO. LTD.,

Ley Street, Ilford, Essex. Tel.: Ilford 2021

46/25

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

NOVEMBER 26.

*†**Southampton CBC.**—Repairs and improvements, Mount Pleasant Sec. Sch. Boro' A. Dep. £1. Tenders by December 20.

NOVEMBER 29.

*Northamptonshire CC.—Joinery fittings, Kettering Gram. Sch. County A., Northampton.

DECEMBER 6.

*Cambridge City C.—External painting of 928 houses. City E&S.

DECEMBER 10.

Morecambe and Heysham BC.—Repair of sewage storage tanks. Sir Arnold Waters, MICE, 25, Temple-row, Birmingham, 2. Dep. £3 3s.

DECEMBER 11.

Orpington UDC.—E&S. (Materials.)

JANUARY 7.

*Sheffield City C.—Mechanical and electrical installations for first stage Colleges of Technology and Commerce, Pond-st. J. L. Womersley (A), City A. Dep. £10.

NO DATE.

*Oxford City C.—Furniture and equipment, College of Technology, Art and Commerce. C. F. L. Piggott, Chief Educ. Officer, 77-79, George-st.

ROADS, SEWERAGE AND WATER WORKS

NOVEMBER 27.

*†**Essex CC.**—Main drain, High View, Chigwell. County A, Chelmsford.

DECEMBER 6.

*Barry BC.—Roadworks at Dorothy-close, off Dorothy-ave., Colcot. BE. Dep. £2 2s.

*Rhondda UDC.—Roads and site works for 82 houses at Marshfield-rd., Maerdy. C. Girgell, ARIBA, 13, Ystrad-rd., Pentre. Dep. £3 3s.

DECEMBER 7.

Doncaster CBC.—About 3,200 lin. yds. surface water sewers; deepening, widening and regrading of dyke; reconstruction of railway culvert, etc., for Lower Bessacarr drainage scheme. BE. Dep. £3 3s.

DECEMBER 10.

Abingdon RDC.—9¼ miles of 6 in. to 9 in. sewer and manholes, three pumping stations, and sewage disposal works. Messrs. Howard and Humphreys & Sons, Victoria Station House, Victoria-st., SW1. Dep. £5 5s.

East Shropshire W. Bd.—Laying of 7,200 lin. yds. of spun-iron water mains. Sir Arnold Waters, MICE, 25, Temple-row, Birmingham, 2. Dep. £5 5s.

DECEMBER 16.

Gloucester City C.—2,500 yds. of brick-lined concrete segmental sewer and precast concrete tube, sewer, etc. City E&S. Dep. £10 10s.

GENERAL BUILDING WORK (LONDON)

Bermondsey.—SITE ACQUISITION.—TP Com. recommend the acquisition for housing purposes of land and buildings at Bermondsey Abbey-st. North.

Bethnal Green.—SITE APPROPRIATION.—LCC Ed. Com. recommend the appropriation from housing purposes to education purposes of a site in Globe-rd., Portman-pl., Allas-rd., Lansdell-pl., and Digby-st., for the eventual erection of a 13-form entry county secondary school on the enlarged site of Morpeth county secondary school.

Dulwich.—COUNTY SECONDARY SCHOOL.—LCC Ed. Com. recommend approval of a scheme prepared by LCC architects' department for the erection of a county secondary school for about 1,400 boys on a site of 5½ acres at Red Post Hill. Construction will be mainly of reinforced concrete and brick, with precast-concrete facing-slabs, glass and brick external cladding, at an estimated cost of £430,330.

Finsbury.—SITE ACQUISITION.—The acquisition at an estimated cost of £137,000 of a site in Risinghill-st., for use in the erection of a county secondary school for 2,000 pupils as one of the projects for 1955-57 has been recommended by LCC Ed. Com. The establishment of the school has already received M of E approval.

Greenwich.—EXTENSION OF DEPOT.—MBC are recommended to approve proposals for the extension of buildings at Blackheath Depot, including additional offices at the northern end of the canteen, a garage for four vehicles with offices above, and open bays for various materials, at an estimated cost of £9,500.

Greenwich.—APPOINTMENT.—Hsg. Com. recommend that G. F. K. White, FRICS, 23, Cathedral-mans., 262, Vauxhall Bridge-rd., SW1, be engaged as quantity surveyor in connection with the redevelopment of the sites of Nos. 46-49, Halstow-rd. and Nos. 1-23, Ormiston-rd.

Greenwich.—SITE CLEARANCE.—MBC is recommended by Hsg. Com. to proceed with the acquisition and clearance of lands in the Haddo-st. area.

Hendon.—LIBRARY, CIVIC RESTAURANT.—TC is to apply for MH&LG loan sanction of £14,520 for the acquisition of sites for the proposed Edgeworth civic restaurant and library.

Hendon.—TRANSPORT GARAGE.—BC are recommended to approve revised plans submitted by BE&S for the construction of a new transport garage and the reorganisation of Hendon Way Depot, and to instruct BE&S to obtain tenders for the work.

Hendon.—FLATS.—BE&S is to submit a further report on proposals for the erection of 9 flats on site No. 32, North-rd., Burnt Oak.

Hendon.—REVISED PLANS.—BE&S has submitted amended plans showing a rearrangement of units in the proposed three-storey block of flats fronting Holders Hill Circus, and is to submit revised plans showing the new elevations.

Hendon.—FLATS.—BC have approved detailed plans submitted by BE&S for the erection of 12 flats on land to the east of No. 48, Broadhurst-ave., Edgware; also for the erection of five shops and maisonettes at the junction of Glengall-rd. and Aldridge-ave., Edgware. BC have also approved outline proposals by BE&S for the future development of the West Hendon area; amended front elevations for the three-storey block of flats and one shop proposed to be erected by BC at Layfield-ave., NW4; and the development for business or light industrial purposes of about 17 acres of land on the south side of North Circular-rd., NW2.

Holborn.—COUNTY SECONDARY SCHOOL.—A scheme prepared by LCC architects' department has been approved by LCC Ed. Com. It provides for the erection of a new county secondary school for about 500 girls on a site in Prospect-terr., at a total estimated cost of £192,390.

Islington. — REDEVELOPMENT. — The acquisition, clearance and partial redevelopment for housing purposes of about two acres in Luard-st., capable of providing about 90 dwellings, has been recommended by LCC Hsg. Com.

Kensington.—GIRLS' SCHOOL.—M of E has approved the establishment of a new RC secondary school for girls on a site adjoining that of the boys' school (already under construction). The cost of the site acquisition and clearance will be £52,466, and plans have been prepared by Nicholas and Dixon-Spain, FF.RIBA, 19, Hanover-sq., W1, for the erection of the proposed school at an estimated cost of £152,550. LCC's approval is recommended.

Lambeth.—LOAN SANCTION.—MH&LG have granted loan sanction to MBC for the borrowing of £20,059 in connection with the site finishing and erection of 12 garages at site No. 23, Benton's-la.

Lambeth.—APPOINTMENT.—Hsg. Com. recommend that Clifford Culpin & Ptnr., FA.RIBA, 3, Southampton-pl., WC1, be appointed as architects for the development of site No. 30, Somers-rd. and site No. 31, Endymion-rd.

Lambeth.—SITE ACQUISITION.—LCC are to acquire land in Brixton Water-la. for housing purposes.

Lambeth. — DEVELOPMENT. — Hsg. Com. have approved proposals by A. W. Kenyon, FRIBA, 15, Adeline-pl., Bedford-sq., for the stage 2 development of site No. 2, Hartingdon-rd., providing for the erection of 239 dwellings, with shops. Work is expected to commence in April, 1955.

Lambeth.—FLATS AND MAISONETTES.—Proposals by H. Moncrieff, FRIBA, AMTPI, of Co-operative Planning, Ltd., 73b, South Side, Clapham Common, SW4, for the development of site No. 5, Opal-st., have been approved by Hsg. Com. They provide for the erection of 202 dwellings on the site, comprising flats and maisonettes, together with a small shopping centre, at a total estimated cost of £686,000.

Lambeth.—SMALL SITES.—Proposals have been made by MBC for the erection of four flats on site No. 79, Mervan-rd.; six flats on site No. 88, Woodland-hill, and the conversion of No. 20, St. John's-cres. to provide seven flats. The appointment is recommended by Hsg. Com. of P. Walters, FRICS, 19, Sicilian House, Sicilian-ave., WC1, as quantity surveyor for the development of site No. 88, Woodland-hill. MH&LG approval has been given to the acquisition of site No. 80, Nos. 11-15 (odd), Glenelg-rd.

Lewisham.—SECONDARY SCHOOL.—A scheme has been prepared by the governors of Northbrook CE secondary school for the erection of a new school on a site in Brightfield-rd. and Taunton-rd., at an estimated cost of £105,439. The project is included in the 1955-56 education building programme.

St. Marylebone.—DEVELOPMENT.—The assistance of MH&LG is to be sought by MBC in opposing the proposed development of the De Walden Buildings by the erection of an additional storey and shops, for which TP permission has been issued by the LCC, who are not prepared to revoke it.

St. Marylebone.—COLLEGE ASSEMBLY HALL.—MH&LG has allowed an appeal by Louis de Soissons & Ptnrs., architects, 3, Park Square-mews, NW1, for the erection of a new building at Sussex Lodge, Regent's Park, for the Royal College of Obstetricians and Gynæcologists, to contain an assembly hall (500 seats), ancillary rooms, etc., and four-storey administrative block.

St. Marylebone.—FLATS.—MBC are recommended to approve the loan to the Aldridge Estates Investment Co., Ltd., of 90 per cent. of the cost (estimated at £12,500 of developing the site of Nos. 25-27, Belgrave-gdns., NW8, by the erection of a block of eight flats.

Southwark.—REINSTATEMENT.—TP approval has bene given to proposals by Gay-Cuming Properties, Ltd., 210, Earls Court-rd., Kensington, SW5, for the reinstatement of a war-damaged building at the site of No. 226 and 228, Waterloo-rd. to provide two shops with residential accommodation over.

Southwark.—HOUSING DEVELOPMENT.—Proposals by the Superintending Architect, LCC, County Hall, SE1, for the development for housing purposes of the site bounded by Orb-st., Deans Buildings, Dawes-st. and East-st. have been given TP approval by MBC.

Southwark.—MAINTENANCE DEPOT.—The erection of a maintenance depot, to include assembly and repair shops, administration offices and vehicle storage, on the site of Nos. 5-7, Marshalsea-rd., proposed by A. F. Bennett, MA, ARIBA, 35, Queen's Gate Mews, SW7, on behalf of Communication Systems, Ltd., has been given TP consent.

Southwark.—PRIMARY SCHOOL.—LCC approval is recommended for a scheme proposed by the managers of St. Paul's CE primary school for the erection of a new building for the school at a revised estimated cost of £75,073.

Tottenham.—DEVELOPMENT.—BC propose to build 305 houses and flats to house 1,253 people on 20 acres of land near The Causeway and Coopers Lane-rd., Potters Bar.

Wandsworth.—REDEVELOPMENT.—The acquisition, clearance and partial redevelopment for housing purposes of about 16 acres of the grounds of Springfield Hospital, Aboyne-rd., together with an adjoining acre, has been recommended by LCC Hsg. Com. Estimated cost of the proposals is £65,500.

Westminster.—SECONDARY SCHOOL.—The governors of St. Michael's CE secondary school have prepared a scheme for the erection of new school buildings on a site between Whitaker-st. and Graham-ter., at an estimated cost of £162,925. Tenders are to be invited.

(PROVINCIAL)

Bridgnorth.—Star Aluminium Co., Ltd., propose erection of new factory at junction Stourbridge-rd./Old Kidderminster-rd. Architects, Jennings, Homer & Lynch, Brierley Hill.

Brierley Hill.—UDC propose erection of public baths. Architect, J. R. Moore, Birmingham.—UDC to invite tenders for erection of 26 houses.

Buxton.—Plans submitted to BC: GPO garage and workshop at Palace-rd., for Ministry of Works; garage and service station at Macclesfield-rd., for J. Plant & Sons; extensions and lavatory accommodation at Market-st., for Otter Controls, Ltd.; four police houses and garages at Mosley-rd., for Derbyshire CC.

Chester.—TC approved layout for 34 flats and 80 houses at Hare-la.

Chesterfield.—RDC received allocation of 225 houses for erection in 1955.

Consett (Durham).—Trade union organisations approved scheme and secured site for a war memorial hall to include licensed club, est. cost about £70,000.

New leaflets on

SLIDING DOOR GEAR

HAVE you copies in your reference file of the latest leaflets showing the range and applications of KING Sliding Door Gear? From the lightest domestic installations to heavyweight power operated doors, there's a KING door set for every need. Get the details—write for your copy.

KING

REGISTERED TRADE MARK

SLIDING DOOR GEAR

Covered by British Patents

GEO. W. KING LTD., 202 ARGYLE WORKS STEVENAGE, HERTS. TEL.: STEVENAGE 440

Councillor J. Donnelly, Consett, fund chairman.

Crawley.—Dev. Corpn. to lease seven sites to LCC for erection of six family houses, with staff house, in Ifield neighbourhood, total est. cost £39,014.

Cumberland.—EC propose erection of new library at Maryport, £24,000 est.

Darlington.—EC received sanction to proceed with big extensions and alterations to Queen Elizabeth gram. sch. and St. Mary's gram. sch, hitherto refused. Plans by Boro' A. E. A. Tornbohm.

Easington.—MH&LG approved RDC's £76,000 scheme for construction of pavilion block at Crimdon. Detailed plans to be prepared by S, R. R. Lumsden, Council Offices.

Eccles.—BC approved plans: Office at rear of 113, Liverpool-rd., for Motlers Stores, Ltd.; extensions to factory at George-st., Eccles, for H. Clarke & Co. (Manchester), Ltd.; motor showroom at Cambridge-gr. and Wellington-rd., for Ashmall & Parkinson, Ltd.; erection of new building as store for food products on north side of Belmont-st., for Farleys Infant Foods, Ltd., Plymouth.

Fylde.—RDC to erect 20 houses at Warton and 12 at Staining.

Gateshead.—Hsg. Com. approved plans by Boro' S, for seven houses and 12 aged persons' dwellings at Fountain View.

Golborne.—UDC approve estimate of £48,060 for 40 dwellings at Laburnum-rd. estate.

Hertford.—Scheme for outdoor swimming bath at Balls Park at est. cost £30,213, excluding price of land, approved by BC.

Houghton.—UDC received approval to building of 50 houses at Shiney-row, cost £64,356. Plans by S.

Jarrow-on-Tyne.—TP & Hsg. Com. approved scheme for erection of 86 houses at South Leam-la. estate, cost £103,842.—TC been allocated 200 houses for erection in 1955. BE. H. W. T. Perkins, Town Hall.

Kettering.—TC propose erection of bus stn. and inquiry office adjoining present bus garage at Northampton-rd.

Lancaster.—TC propose erection of 24 houses at Morley-rd., Hare Runs estate.

Littleborough.—UDC approved erection of branch library at Smithy Bridge.

Liverpool.—United Molasses Co., Ltd., Regent-rd., propose erection of large maintenance garage and machine shop.—Carrs Motors, Ltd., 20, Hardman-st., propose new service stn. at Colquitt-st. Architect, B. J. Lewis, Angel-bldgs., Dale-st.

Manchester.—Parmiter, Hope & Sugden, Ltd., Fluvent Works, Vernon-st. and Newton-ave., Longsight, propose extensions to existing factory works. Architects, Young & Purves, 12, St. Anne's-sq., Manchester.—London Waterproof Co., Ltd., Bengal-st. and Union-st., Ancoats, propose extensions to factory warehouse. Plans submitted by L. D. Clegg Morgan & Co., Surveyors, 5, Queen-st., Oldham.

Mansfield.—BC approved plans for extensions to works at Milton-st., for A. C. Valance, Ltd.; new church at Chesterfield-rd. south, for Elim Four Square Gospel Alliance; four shops at Chesterfield-rd. North, for G. Rose.

Northampton.—EC received approval for inclusion of RC sec. mod. sch., £86,784 est., in 1955 reserve programme.—Northamptonshire Town and County Assoc. for Blind propose extensions to workshops at Gray-st. Architects, Sir John Brown, Henson & Partners, 30, Billing-rd., Northampton.

North Riding.—EC approved building of sch. at Stokesley for 520 children instead of 300. Plans by Cty. A, Northallerton.

North Riding.—EC to build new prim. sch. at Leeming. Plans by Cty. A, County Hall, Northallerton.

Northumberland.—CC to spend £10,920 on erection of four police houses and garages at West Denton.—CC purchasing site at Seahouses for erection of fire stn.—EC's building programme for next year expected to include Wallsend RC prim. sch. (£40,000); Prudhoe cty. sec. sch. (£140,000); South-East Northumberland cty. gram. sch. (£112,000); Wallsend cty. sec. sch. (£140,000); and day sch. for educ. subnormal pupils (£43,000).

Notts.—EC propose four-bay fire stn. at Kirby-on-Ashfield. £24,000 est., in 1955/6 building programme.

Oldham.—BC propose erection of aged persons' residential home at corner Lees New-rd./Rhodes-hill, Holts estate; to erect 46 aged persons' bungalows at Holts estate.

Ormskirk.—BC to prepare plans for four shops with living accommodation at Scott estate.

Rowley Regis.—Henry Heathcock & Sons propose extensions to factory at Clifton-st.—TC to prepare detailed plans for erection of 14 shops on Brickhouse Farm estate.

St. Just (Cornwall).—UDC approved tender for £70,080 for erection of 36 houses and eight flats at Lower Boscaswell, Pendeen, Cornwall. Work may begin by end of year.

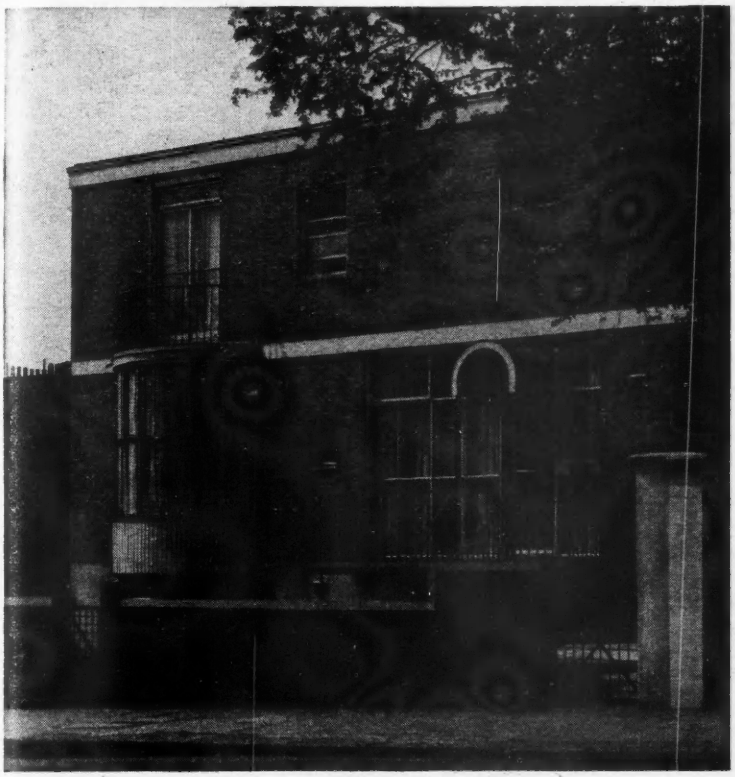
South Shields.—Corp. to apply for sanction to borrow £14,812 for proposed ambulance stn. Plans by BE. J. Reid.

Stevenage.—Dev. Corpn. to arrange for erection for LCC of small homes for children on seven sites, total est. cost £41,041.

Stockton-on-Tees.—MH&LG approved in principle first stage of TC's plans for new municipal offices and municipal hall. Ministry stated that schemes should proceed as separate projects. Revised plans accordingly to be prepared by Boro' A. T. C. Hartley, 28, The Square.

Sunderland.—TC received loan sanction, £15,006, for alterations to Railway Row Depot; and £48,612

ZINC WEATHERINGS

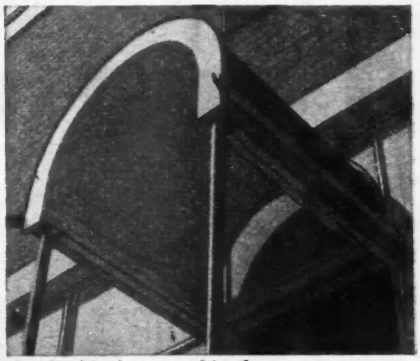


House at Kensington. Architects: Leonard Manasseh & Partners.

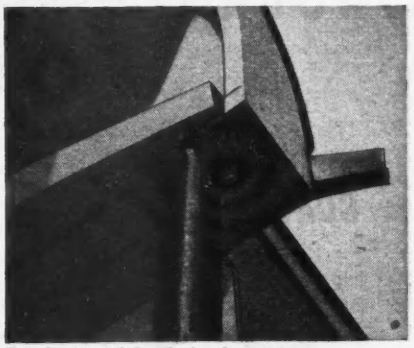
In this house, contemporary design fits snugly into a Kensington background. It also illustrates some interesting uses of zinc—to cover the neat porch hood, and as weatherings for window sills and roof verge. For weatherings, zinc is easy to fix and rigid, and prevents staining of wall surfaces.

From roof to foundation, zinc has vitally important uses in contemporary building—for gutters, pipes, weatherings, flashings and hoods. And there are now no restrictions on its use. Supplies are plentiful, and likely to remain so. The price of zinc has dropped considerably, and it is now one of the cheapest permanent materials.

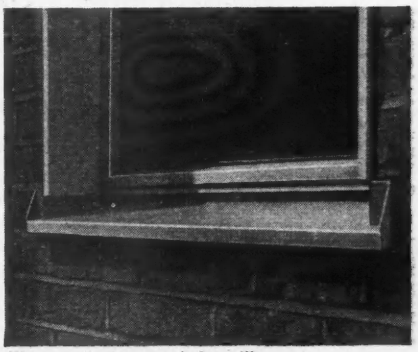
The Zinc Development Association is a non-trading body which is always prepared to give technical help to potential users. Publications, together with lists of stockists of all zinc building materials and of firms specialising in zinc work, are freely available.



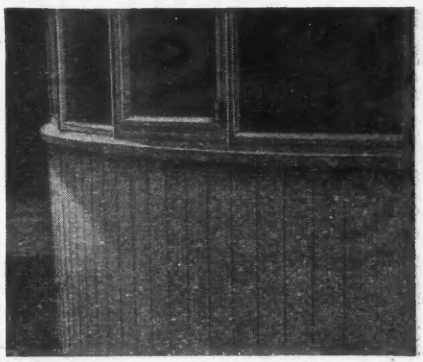
Porch with zinc covered hood.



Detail of porch hood, showing gutter.



Zinc weathering on window sill.



Weathering to curved sill of bay window.

THINK ZINC Zn

ZINC DEVELOPMENT ASSOCIATION • LINCOLN HOUSE • TURL STREET • OXFORD • TELEPHONE: 48088

Tough-

THESE AUSTIN TRUCKS!

- Latest Hire Purchase facilities.
- PART EXCHANGE (any type).
- Bodywork Specialists.
- Vans and Trucks — 5 cwt. to 8 tons.
- DAY AND NIGHT SERVICE.

CONSULT

CarMart Ltd

COMMERCIAL VEHICLE DIVISION

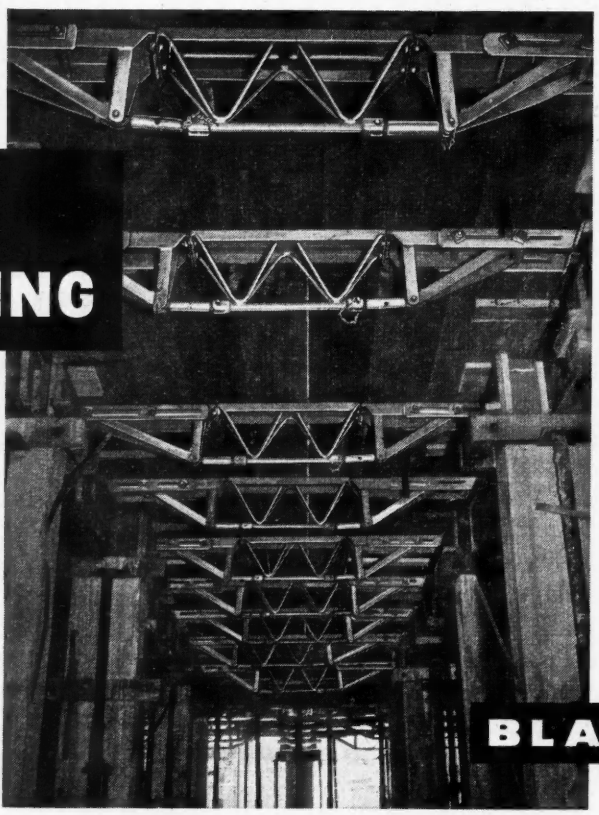
WELSH HARP, EDGWARE RD., London, N.W.9 HENdon 6500
and Branches in the London Area

I am interested in the AUSTIN.....

I have for Part Exchange.....

NAME.....

ADDRESS ..... B.



HICO CENTERING

knocks the props out!

BY CUTTING out propping, HICO Centering speeds up concrete slab or roof construction. Less time is needed to erect and strike HICO Centering enabling further substantial reductions in costs to be made. HICO Centering is adaptable to any span.

BLAW KNOX

BK 133

BLAW KNOX LIMITED
(Box 113), 90/94 Brompton Road, London, S.W.3 **Telephone: KENsington 5151**

for erection of 38 houses on Grindon Village estate.—Finance Com. approved spending of £359,549 on erection of 279 houses on Grindon and Southwick estates.

Wakefield.—TC to invite tenders for 200 houses at Kettlethorpe estate. Approved sketch plans for six war memorial bungalows at Eastmore estate.—EC propose erection of new sch. at Eastmoor.

Wallasey.—BC to negotiate contract for erection of 32 dwellings with J. L. Rawsthorne & Co., Belvedere Sawmills, 23 dwellings with J. H. Waring, Barrodale-rd., Morton, and 12 with T. Rule, Harlian House, Cobham-rd., Morton.

West Bromwich.—TC approved plans for three-storey office block, for Smith & Davis, Ltd. (plans by A. L. Snow, 146, Corporation-st., Birmingham); showroom, offices and service depot at Roebuck-la., for Colmore Depot, Ltd. (plans by E. McKie & Partners, 176, Bromsgrove-st., Birmingham 5); motor-car factory at Lyttelton Hall estate, for Jensen Motors, Ltd. (architects, Simms, Gifford & Bye, 323, High-st., West Bromwich); 47 houses and 40 bungalows at Hamstead-rd., for Davis Estates, Ltd. (plans by Hurley, Robinson & Son, 6, Cherry-st., Birmingham); new showroom and maintenance shop at High-st., for W. & T. Avery, Ltd. (architects, Simms, Gifford & Bye).

Whitby.—UDC to obtain tenders for reconstructing Whitby Fish Quay. Consulting E, Lewis & Duvivier, Grosvenor-gdns., SW1. Work to cost about £70,000.

Whitby.—UDC instructed its architect. C. D. Taylor. 41. Baxtergate, to prepare plans for 90 houses and 16 bungalows on north-west section of White Levs estate, Whitby.

TENDERS

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *subject to modification.*
¶ Denotes *accepted by H.M. Government Departments.*

Accrington.—52 houses and 48 flats at site No. 3, Burnley-rd. estate, for TC: *Geo. Wimpey & Co., Ltd., London.

Banffshire.—Reconstruction and additions, etc., for Scottish Malt Distillers Co., Ltd. Plans by staff architects, 15, Coates-cres., Westend, Edinburgh: *William Arnott, Macleod & Co., Ltd., Russell-rd., Edinburgh (est. cost £70,000).

Barbridge (nr. Chester).—Erection of methodist chapel: *R. Sproston, Wall-la., Nantwich.

Belper.—20 houses at South Wingfield, for RDC: *James Milward & Sons, Ltd., Belper.

Birmingham.—Contracts placed by the House Building Com. during September and October:—Two dwellings at Caroline-rd., Moseley: *Sargent Bros., £3,110; eight dwellings at Brunswick-rd., Sparkhill: *J. T. Harris, Ltd., £10,290; 12 dwellings at Pineapple-rd., Kings Heath: *Michael Mooney, Ltd., £19,430; eight dwellings at Chestnuts estate: *Sargent Bros., £13,002; 96 dwellings at Bristol-rd. South: *C. Bryant & Son, Ltd., £145,800.

Bradford-on-Avon.—Erection of 23 houses at Budbury Tyning, for UDC: *T. Holdoway & Sons, Ltd., Westbury, £33,562.

Brighton.—Extension to factory, Hollingbury, for CB. Architects, Nightingale & Ambrose, F.FRIBA, 27, John Adam-st., WC2. Quantities by Harris, Rourke & Simpson:—

A. Cruttenden & Sons, Ltd., Brighton	£40,162
Richard Cook & Sons (Crawley), Ltd., Crawley	40,145
*McKellar & Westerman, 143, Church-rd., Hove	40,023

Carlisle.—Works for City Council:—Mountain (Stage I), roads and sewers: *John Laing & Son, Ltd., £58,667; 68 houses at Harraby estate: *John Laing & Son, Ltd., £83,443; 12 bungalows, including roads and sewers, Raffles-Newtown estate: *John Laing & Son, Ltd., £13,007; 14 garages at Montreal-st.: *John Laing & Son, Ltd., £2,395; annual road surface dressing of carriageways: *Bituminous Road Products, Ltd., Middlesbrough, £5,440; electrical installations in Town Clerk's and Education Offices: *David Thompson & Son, Ltd., Carlisle, £388; electrical installations in bungalows at Harraby estate and bungalows at Upperby estate: *North-Western Electricity Brd., Carlisle, £1,470; electrical installations in 142 houses at Harraby estate: *George Bowman, Ltd., Carlisle, £3,860.

Carlisle.—Erection of church hall, for Trustees of St. Herbert's Church: *J. Millar & Sons, 15, London-rd., Carlisle.

Carmarthenshire.—Police headquarters, Friars Park, Carmarthen, for CC. W. T. Lloyd, ARIBA, Cty. A. Quantities by W. T. Hills & Co., Swansea: *J. M. Evans (Builders), Ltd., Blue-st., Carmarthen.

Chester.—Large extensions to County Offices, for CC: *J. Gerrard & Sons, Ltd., Swinton, nr. Manchester.

Clackmannan.—Two houses at Main-st. West, Menstrie, for CC:—Mason and brick work, J. Phillip & McGee, Ltd., Ann-st., Tillicoultry; carpenter and joiner work, Robert Keir, 150, High-st., Tillicoultry; glazier work, A. Candlish, High-st., Alloa; tiler and roughcast work, P. Kelly & Sons, Ltd., 33, Brunswick-rd., Edinburgh 7; plumber work, J. D. Burns, 31, Chapel-st., Dunfermline; plaster work, J. Wallace & Co., 62, Lower Bridge-st., Stirling; electrical work, A. M. Todd, 83, High-st., Tillicoultry.

Corby.—124 houses at Lodge Park estate, for UDC: *Sherriff & Co. (1943), Ltd., £167,738.

Coventry.—Erection of sec. gram. section at Ullathorne gram. sch, for EC: *W. H. Jones & Sons, Ltd., Coventry.

Doncaster.—Houses for BC:—14: *H. Marshall & Sons, Manor-dr., Doncaster, £17,271: 20 houses and two bungalows: *J. S. Pott, 6, Church-la., Bessacarr, £27,090; 10 houses and bungalows: *Beckett & Wood (Builders), Ltd., 8, Lifford-rd., £14,359; 16 houses and two bungalows: *Cornfield & Sons, Ltd., 12, Church-la., Bessacarr, £22,096; 12 houses and one bungalow: *T. E. Wright, 84, Ardeen-rd., £15,286; 11 houses and one bungalow: *Kidger Bros., 2, Church-la., Bessacarr, £14,545; 10 houses and one bungalow: *C. E. Flanagan, £12,946.

East Elloe.—38 houses, Holbeach-Hallgate estate, for RDC. K. Atkinson, LRIBA, architect, East Elloe RDC, Holbeach, Lincs:—

W. Lawrence & Son, Ltd., Swaffham	£55,491
F. Parker & Sons, Spalding	52,234
S. Hale & Sons, Spalding	50,489
W. Foster & Sons, Grantham	47,766
Langwith Builders, Ltd., Holbeach	46,400
T. Ward, Boston	46,980
*A. K. Wagg & Co., Tilney-All-Saints, King's Lynn	45,520

(Subject to Ministry approval.)

Felling (Co. Durham).—14 houses near Coldwell Park estate: *Gill & Nicholson, Ltd., Saville-row, Newcastle-on-Tyne.

Glasgow.—Protestant prim. sch. at site No. 3, Balarnock. John Macnab, A. Education Offices, Bath-st., Glasgow, WC2: *Spiers, Ltd., Blythswood-sq., West George-st., Glasgow, WC2, £109,998.

Glasgow.—Houses at Garthmanlock housing development site. Archibald G. Jury, FRIBA, A, Glasgow Cross, The Trongate, Glasgow, EC1: *Robert W. Stewart & Co., Ltd., St. Enoch's-sq., Glasgow, C1.

Glasgow.—22 houses at Maxwell-dr. and Gower-st., Shields-rd., Pollockshields. Norman Macfadzean, FRIBA, A, 147, West Regent-st., Glasgow, WC2: *John Lawrence (Glasgow), Ltd., West Regent-st., WC2.

Greenock.—Over 120 houses to be erected at Parkfield site, off Inverkip-rd. J. Austen Bent, ARIBA, A, 15, Palmerston-pl., Westend, Edinburgh: *Athol Houses, Ltd., Bunfillan Contracting Works, Paisley-rd., Glasgow, S2; patent heating installation and allied works: *John & William Kerr (Heating Engineers), Ltd., Virginia-st., Greenock.

Greenwich.—Erection of 88 flats at Coldbath-st. housing estate, for BC:—

Geo. Wimpey & Co., Ltd.	£171,684
Simms, Sons & Cooke, Ltd.	170,727
Joseph Cartwright, Ltd.	170,716
Halse & Sons, Ltd.	169,835
*Gee, Walker & Slater, Ltd.	165,870

Hammersmith.—Repair and conversion of 69-73, Lakeside-rd., W14, for BC: *Direct Labour, £9,096 (in lieu of tender previously accepted).

Haslingden.—Factory for Durie & Miller, Ltd., Bury: *Ashworth & Hobson, Ltd., Rawtenstall.

Hexham.—Erection of two blocks of three-storey flats at Causey Hill, for UDC. W. A. Hancocks, S: *Gregory Housing, Ltd., Worthing (work commenced).

Lambeth.—Works, for MBC: Erection of three houses at Tulsemere-rd. and four at Rattray and Bankton-rds., *H. T. Oliver & Sons, Ltd., £7,343 and £9,513; conversion of 134, Brixton-hill into flats, *Eason & Sutton, £4,898.

Lanarkshire.—New schools from standard designs as follows (Plan E):—Hamilton Protestant, Udston site; Carluke Protestant, Crawforddyke site; Larkhall Protestant, Whinnie Knowe site; Udston Catholic, Hamilton site. William S. Watt, FRIBA, Education A. County Offices, Albert-st., Motherwell-Wishaw: *James Miller & Partners, Ltd., 18, George-st., Edinburgh, £317,760. Group 4 (Two Stream-Two Storey schools), average price per sh., £79,440.

Leeds.—236 dwellings at Intake-la. area No. 3, for TC: *Wm. Airey & Son (Leeds), Ltd., Leeds, £275,391.

Beachcroft Partitions
STAND THE TEST OF TIME
CELLULAR OR SOLID BLOCKS
USED FOR
INNER LININGS
INCREASES THERMAL INSULATION
33%
Harrow Road, Leytonstone, E.11
TELEPHONE:
MARYLAND 4747 (2 LINES)

LCC.—Construction of 40 flats in two five-storey blocks, 51 maisonettes in three four-storey blocks, and nine houses in two two-storey blocks at Lytton-gr. site, Wandsworth, and 35 flats in a five-storey block, 36 maisonettes in two four-storey blocks, and nine houses in two two-storey blocks at Newlands House site, Wandsworth. There will be 35 tenants' stores, one shop and a toddlers' play space on the Lytton-gr. site, and 36 stores, a fitted playground and a transformer chamber on the Newlands House site. The rates and prices in the bills of quantities for blocks 1 to 5 on the Lytton-gr. site (contract A) will be used to value the cost of the construction of blocks 6 and 7 on the site (contract B) and that of blocks 1 to 5 on the Newlands House site (contract C):—

Speirs, Ltd., Westminster	£152,152
F. Troy & Co., Ltd., Lambeth	149,980
C. Bryant & Son, Ltd., Westminster	148,820
Rice & Son, Ltd., Lambeth	146,794
Lavender, McMillan, Ltd., Worcester Park	146,204
M. J. Gleeson (Contractors), Ltd., North Cheam	142,949
Rush & Tompkins, Ltd., Sidcup	139,581
Harry Neal, Ltd., St. Marylebone	137,962
The Unit Construction Co., Ltd., Feltham	135,569
*Tersons, Ltd., Finchley	131,856

Architect's comparable estimate is £136,048.

Construction at Bulow-rd. site, Fulham, of 48 maisonettes and seven flats in a nine-storey block, and 76 flats in two five-storey and three three-storey blocks, 16 two-storey houses, 56 tenants' stores, and three small play spaces are included in the development. The rates and prices in the bills of quantities for four of the blocks (contract A) will be used to compute the cost of the construction of the other blocks (contract B), and as an additional guide the tenderers were asked to submit a schedule for 12 houses included in contract B. The amounts for contract A and the schedule for the houses in contract B being as follows:—

	Contract A	Schedule
M. J. Gleeson (Contractors), Ltd., North Cheam	£247,127	£22,478
The Bunting Construction Co., Ltd., Lambeth	236,485	23,422
Wilson Lovatt & Sons, Ltd., Westminster	234,240	22,101
A. T. Rowley (London), Ltd., Tottenham	231,996	21,984
W. J. Simms, Sons & Cooke, Ltd., Westminster	228,239	20,954
Rowley Bros., Ltd., Tottenham	227,714	22,710
Rush & Tompkins, Ltd., Sidcup	226,097	20,803
Tersons, Ltd., Finchley	219,814	20,444
Stewart & Partners, Ltd., St. Marylebone	217,920	19,745
*The Unit Construction Co., Ltd., Feltham	214,640	18,449

Architect's comparable estimates are £226,321 and £20,647, respectively.

London (Air Ministry).—Contracts to value of £500 or over for week ended November 13:—

Building work: T. Hosker, Ltd., 29, West Quay, Ramsey, Isle of Man; Gee, Walker & Slater, Ltd., Uttoxeter Old-rd., Derby; John Hunt, Ltd., South Wharf, Cleveland-rd., Gosport, Hants; Wilson Lovatt & Sons, Ltd., Clarence-st., Wolverhampton; William Eaves & Co., Ltd., Daggers Hill Works, Vicarage-la., Blackpool; H. G. Ross & Son, Ltd., Victoria-rd., Netley Abbey, Southampton. *Construction of hard-standings*: Highways Construction, Ltd., Iddesleigh House, Caxton-st., Westminster, SW1. *Repairs and redecorations*: Y. J. Lovell & Son, Ltd., 17, Easton-st., High Wycombe, Bucks. *Heating and ventilating services*: Comyn Ching & Co. (London), Ltd., 15/21, Shelton-st., WC2. *General maintenance work*: Ellis Thompson & Co. Ltd., 1, James-st., Louth, Lincs. *Hot-water services*: The Regional Heating Co., 28, Victoria-st., SW1.

London (British Railways).—London Midland Region announce that the following contracts have been placed: Thos. Wrigley, Ltd., Bowman Works, Prestwich, Manchester, for reconstruction of parapet and spandrel walls of bridge No. 7, Smadley Viaduct, on the Manchester loop line; John Laing & Son, Ltd., Dalston-rd., Carlisle, for renewal of roof coverings, stripping and general repairs at the wagon repair shops, Carlisle Currock; Leonard Fairclough, Ltd., 3, Chapel-st., Adlington, Lancs, for Clay Cross (Avenue) exchange sidings for NCB new coke ovens plant; Renovators (Provincial), Ltd., 353, Chester-rd., Cornbrook, Manchester, 16, for cleaning glass in station roofs in the Manchester area; Robert M. Douglas (Contractors), Ltd., 395, George-rd., Erdington, Birmingham, 23, for private sidings facilities, earthworks, drainage, fencing and gates at Perry Barr for S.P.D., Ltd. new railhead depot; Leamore Construction Co., Ltd., 38, Wolverhampton-rd., Walsall, for renewal of 11 platelayers' cabins in the Walsall Engineer's district; W. T. Pickering & Son, Ltd., Watford Heath, Watford, for labour only for cleaning and painting of footbridge and platform screens at Llandudno Junction passenger station.

London (MOW).—Contracts placed by MOW for week ending November 6:—

Beds: MOS Storage Depot, Kempston Hardwick, refelting roofs, The Ragusa Asphalte Paving Co., Ltd., 70-74, City-rd., EC1. *Ches:* Post Office, Northwich-rd., Weaverham, erection of UAX. Exors. of S. Appleton, Winnington-la., Northwich. *Essex:* Walthamstow, erection of Coppermill Telephone Exchange, Hammond & Miles, Ltd., Scrafton-rd. Works, Ilford-la., Ilford, Essex. *Lancs:* Davies-st., Platt Bridge, Wigan, erection and completion of automatic tele-

phone exchange, John McGeoch & Sons, Ltd., Arbour-la., Kirkby Trading Estate, nr. Liverpool. *Northamptonshire:* MOS, Yardley Chase, refelting roofs to No. 14 magazine roofs, Scudamore & Luck, 22, Hazelwood-rd., Northampton. *Notts:* Govt. Buildings, Chalfont-dr., three-layer felt roofing to blocks 4 and 5, Fleximastic Roofs & Asphalte, Ltd., Barkby-rd., Leicester. *Shropshire:* MOS new X-ray Laboratory, Overley Hill, nr. Wellington, erection of new premises, Whitchurch (Salop) Contrs., Ltd., Castle-hill, Whitchurch, Salop. *Staffs:* ATE, Streetly, proposed extension to premises, David Charles, Ltd., 220, Cooksey-rd., Small Heath, Birmingham, 10. *Yorks:* HPO, Halifax, extension to TE, Pickles Bros. (Builders), Ltd., Mile Thorn, Halifax.

¶**London (War Dept.).**—Contracts placed by War Dept. for week ended November 6:—

Notts: Repairs to conveyors, Charles W. Ireland & Son, Hamilton. *Warwickshire*: Drainage work, Lewis & Watters, Ltd., Leamington Spa. *Ayrshire*: Roadwork, Hillhouse Quarry Co., Troon. *Berks*: Building, E. C. Hughes, Ltd., Wokingham. *Surrey*: Building, L. F. Richardson, Chichester.

Macclesfield.—10 houses at Robin-la., Chelford, for RDC: *F. Beech, Hurdsfield, Macclesfield.

Mansfield.—50 houses at Ladybrook estate, for BC: *Adam Eastwood & Sons, Ltd., £56,810.

Middlesbrough.—48 houses at Park End site, for TC. J. A. Kenyon, BE, Municipal-bldgs.: *Shannon (Contractors), Ltd., Marsh-rd., Middlesbrough (20); *W. J. Emmerson, North Ormesby, Middlesbrough (28).

Middleton.—Seven shops and five maisonettes at Hollin estate, for BC: *D. Franklyn, Midland Bank-chbrs., Urmston.

Plymouth.—New casualty dept. at Freedom Fields Hospital. Architect, K. W. F. Harris, South-Western Reg. Hospital Brd., 27, Tyndall's Park-rd., Bristol 8. Surveyors, H. S. Haughton & Partners, 14, Glenwood-rd., Mannamead, Plymouth: *A. N. Coles (Contractors), Ltd.; Sutton-rd., Plymouth.

St. Marylebone.—Erection of six flats at Aquila-st., NW8, for BC: *E. J. Lacy & Co., Ltd., £15,789 (or such lesser figure as may be approved by the Min.).

Sale.—Erection of cty. prim. sch. at Springfield-rd., for Cheshire CC: *Peter Hodkinson, Ltd., Devonshire-st., Ardwick, Manchester.

Scarborough.—Block of flats at Seacliff-rd.: *A. Moore & Son, Seamer-rd., Scarborough.

Scarborough.—10 flats at Hoxton-rd., for Municipal Charity Trustees: *Jaram & Son, Gladstone-st., Scarborough, £9,767.

Sheffield.—Work for Reg. Hospital Brd.:—Provision of chest clinic at Scarsdale: *A. F. White, 198, Derby-rd., Chesterfield, £13,703; erection of male adult villa at St. Catherine's Institution: *Frank Haslam, Ltd., 4, Regent-ter., Doncaster, £30,332; upgrading of 40 bed pavilion and extension of 15 bed pavilion at Ransom sanatorium, Rainworth: *H. Rouse & Sons, 30, High-st., Mansfield Woodhouse, £28,994.

Tenterden.—38 houses at Shrubcote estate, scheme No. 6, for BC. H. G. Hunt, Dip Arch, ARIBA, 51, Willington-st., Maidstone, architect:—

J. C. Elkington, Ltd., Tonbridge	£59,999
Trenas & Partners, Ltd., Tenterden	57,240
C. Jenner & Son, Ltd., Folkestone	55,753
Wm. Ellis (Etchingham), Ltd., Etchingham, Sussex	54,649
*S. J. Clark (Folkestone), Ltd., 47-49, Brockman-rd., Folkestone	49,767

Thornaby-on-Tees.—Block of offices at Teesdale Ironworks of Head, Wrightson & Co., Ltd. Architect, F. W. Turnbull, White House, Carlton, Stockton: *John Laing & Sons, Dalston-rd., Carlisle (work commenced).

Thornaby-on-Tees.—Erection of 86 houses at Gilpin Brown estate, for TC. J. L. Watson, BE: *Direct Labour, £109,374.

Wakefield.—12 houses at Eastmoor, for TC: *Searby Bros., Ockenshaw, Crofton.

Wallasey.—Hostel at Moreton, for BC: *J. L. Rawsthorne & Co., Belvedere Sawmills, Wallasey, £25,115.

Wallasey.—Hostel for aged persons, for CBC. W. P. Clayton, ARIBA, Boro' A. Quantities by Horace W. Langdon & Every, 4, Church-st., Liverpool: *J. L. Rawsthorne, Ltd., Belvidere Sawmills, Wallasey.

Wem.—60 houses at Shawbury, for UDC: *Eadie & Co., Wolverhampton.

West Bromwich.—Stage 1 of new factory at Lyttelton Hall estate, for Jensen Motors, Ltd.: *Coseley Engineering Co., Ltd., Wolverhampton; 36 houses at Hateley Heath, for BC: *Gregory Housing, Ltd., £45,618.

West Hartlepool.—House building contracts allocated by TC. A. G. Sinclair, Boro' A: *W. W. Brazell, Ltd., Raeburn-st., West Hartlepool (34); *Taylor & Evans, Elwick-rd., West Hartlepool (32); *Watt Bros., Ltd., Avenue-rd., West Hartlepool (30); *C. M. Yuill, Ltd., Villiers-st., West Hartlepool (24); *F. M. Gibbon, Waldron-st., West Hartlepool (16); W. Brazell, Elwick-rd., West Hartlepool (16); *J. Peel, Glentower-gr., Seaton Carew (16); *Wilson & Gammon, Tower-st., West Hartlepool (14); *Spaldin & Snaith, Grange-rd., West Hartlepool (6).

Whitehaven.—Factory additions for West Cumberland Development Co., Ltd., on behalf of Marchon Products, Ltd. Architects, Ronald Ward & Partners, 33, St. George's-dr., London, S.W.1: *John Laing & Sons, Dalston-rd., Carlisle.

FEDERATION OF MASTER BUILDERS

UNITE FOR STRENGTH

The NORTH WEST REGION *covers* **LANCASHIRE, CUMBERLAND WESTMORLAND, CHESHIRE and NORTH WALES**

Membership open to all bona fide builders and contractors

ANNUAL SUBSCRIPTION

£5 : 5 : 0

COMPREHENSIVE SERVICE OF TRADE NEWS. PROMPT AND PERSONAL ATTENTION TO ALL PROBLEMS.

Further information from:

Regional Secretary
Federation of Master Builders
Williams Deacon's Bank
Chambers, Birkdale, Lancs.
Tel.: Southport 68129

Branches:
Anglesey, Bolton, Manchester, Merseyside, Mid-Cheshire, Oldham, Stockport, Stoke-on-Trent, Widnes and Runcorn, Wigan, Wirral

still unequalled for quality and low cost building
BROAD-ACHESON
CELLULAR BLOCKS
BROAD & CO. LTD. PADDINGTON W2

WOOD BLOCK FLOORS
STEVENS & ADAMS LTD.
Victoria Works,
Point Pleasant, Wandsworth, S.W.18

THE ESSEX STEEL SCAFFOLDING Co LTD
SALES, HIRE
ERECTION
CRADLES
9A HIGH BEECH ROAD
LOUGHTON ESSEX
TEL: LOUGHTON 5022

W & M NEGUS LTD
Building Contractors
Station Works, King James St., Southwark, S.E.1
Telephone:— Waterloo 5474 (3 lines)

GALBRAITH BROTHERS LIMITED
BUILDERS
CONTRACTORS
& ENGINEERS
Registered Office:
61 BARTHOLOMEW CLOSE
E.C.1
MONarch 7597-8
Works:
CRAYFORD BRIDGE
KENT
Bexleyheath 5651-4